

# The Indo-European Elements in Hurrian



*By*  
**Arnaud Fournet**  
*And*  
**Allan R. Bomhard**



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LA GARENNE COLOMBES / CHARLESTON  
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# Preface

This work grew out of preliminary investigations conducted by one of the authors — Arnaud Fournet. As a result of these investigations, Fournet prepared an 18-page paper, mostly built upon Emmanuel Laroche's *Glossaire de la langue hourrite*, in which he presented evidence that there might be a genetic relationship between Hurrian and Proto-Indo-European. In due course, he showed the paper to the other author — Allan Bomhard. After receiving a positive response from Bomhard, Fournet invited him to join in a collaborative effort in which these ideas would be explored in more depth, and Bomhard gratefully accepted the invitation.

This book is truly a collaborative effort. Even though each author took responsibility for certain portions — Fournet primarily for Hurrian and Bomhard primarily for Indo-European —, as work on the manuscript was progressing, each author reviewed, commented upon, enhanced, corrected, or rejected what the other was writing. No part escaped the scrutiny of both authors.

Moreover, the scope of the work went well beyond what was in Fournet's original paper — new and surprising possibilities kept emerging as research continued. What was intended as a more robust paper that expanded upon and refined Fournet's original ideas kept growing in size, eventually becoming the book that we now present to the scholarly community.

Arnaud Fournet  
*La Garenne Colombes*

Allan R. Bomhard  
*Charleston*



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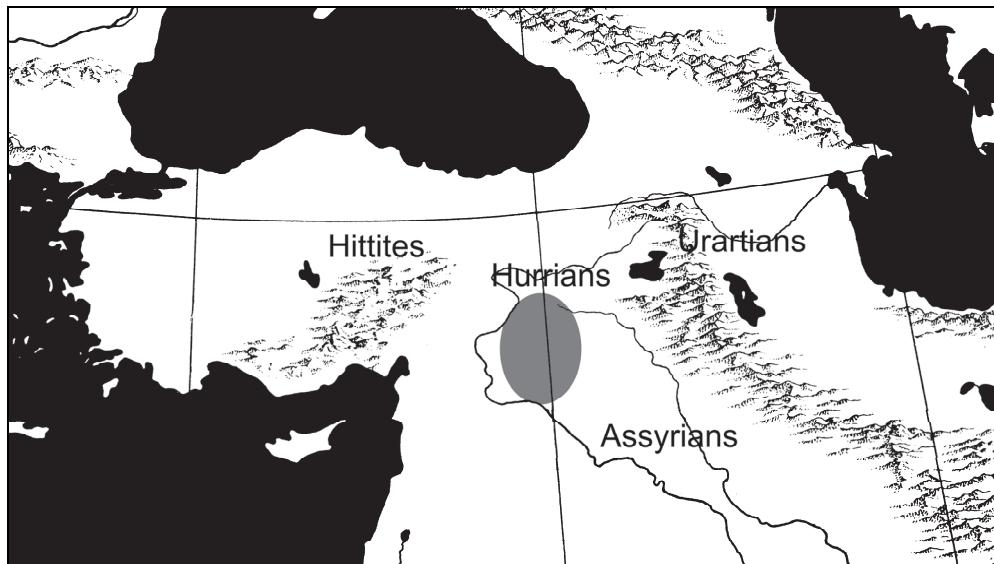
# 1

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## Introduction

### The Hurrian Language

The Hurrian language is attested from the last centuries of the 3rd millennium BCE until around the middle of the thirteenth century BCE. It was called *Hur-li-li* in Hittite, *Horî* in Hebrew, Χοππαῖος<sup>1</sup> in Greek, and [x r ɣ] \*/xuruyi/ in the Ugaritic alphabetic script (the Hurrian ending *-hi-* appears in other ethnonyms). Hurrian is also possibly attested in Egyptian as *Hr*, vocalized as \*[xuru]. The Hurrians are attested in Hattic as <wa-hur-li>, where <wa-> expresses the plural. Hurrian was the language of the once-powerful Mitanni Kingdom.



The shaded area indicates the location of the Mitanni Kingdom around 1350 BCE.

After the Assyrian conquest of the areas peopled by Hurrians, in northern Mesopotamia, many of them seem to have been deported by Tukulti-Ninurta I (1244—1208 BCE), who needed manpower to build his new capital. These events probably caused major disruption in the survival of the Hurrian language. According to Macqueen (1994:1621) and Gragg (2003:255), Hurrian became extinct not long after the fall of that kingdom in the thirteenth century BCE, probably around 1000 BCE. It should be noted that this point of view conflicts with several

<sup>1</sup> [-rr-] in Greek is consistent with \*-rw- attested in <hur-wu-he>.

attestations of typical Hurrian names listed by Gelb (1944:81—83) well after that period. In a paragraph called “Latest Traces”, Gelb wrote: “Gradually Hurrians disappear from the large areas in which they were found so profusely in the several centuries after 1500 B.C. For the time around 1100 B.C. and the following centuries an entirely different ethnic picture is given by the occurrences of Hurrian personal names in Assyrian historical inscriptions. In order to make clear the new geographic distribution, only sure occurrences of names which can be definitely linked with sites are quoted below. [...] 11. Ashurbanipal warred also against Ah-Šeri, king of the Manneans, who had a son, Ualli and a grandson Eri-sinni. Of these three names Ah-Šeri is probably, Eri-sinni certainly, Hurrian. [...] The most interesting conclusion from the negative point of view is that Hurrians are completely absent from central Mesopotamia.” At the beginning of the 2nd millennium BCE, Hurrian was spoken in southeastern Anatolia and in the Zagros-Taurus region of northern Mesopotamia (see map). In the middle of the 2nd millennium, Hurrian influence also spread to Syria and the Cilicia region (Kizzuwadna).

Hurrian texts dating back to around 2300 BCE have been found in the Mardin region, texts dating from the eighteenth century near Mari, and fourteenth century texts in Tell el-Amarna in Egypt, and in Ugarit. Cultic and ritual texts in Hurrian have been found in the archives of the Hittite capital at Hattušaš (modern Boğazköy/Boğazkale). The capital of the Mitanni Kingdom, Waššukani, has yet to be located.

The proto-history of the Hurrian language and people is shrouded with much uncertainty. But there are some indications that the presence of Hurrian people in Upper Mesopotamia is fairly ancient. Some towns in Assyria appear to have typically Hurrian names. And in one precise case, a prince of these towns has been proved to bear a Hurrian name: ‘in the year of Naram-Sîn [he] was successful at Azuhinam on his Subarean campaign and defeated [the Hurrian prince] Tahîsatili’.<sup>2</sup> Another clue of an ancient presence is the non-native Sumerian word *tabira* ‘metallurgy’, which has obvious and strong connections with the following set of Hurrian words: *tab* ‘to melt (metal)’, *tabiri* ‘metal-melter’ and *tabrenni* ‘(copper)smith’. This shows a lasting and widespread presence of the Hurrians in the mountains of eastern Anatolia, where the ressources, work, and trade of metals have been a major economic activity and where Hurrians are the apparently native element. Moreover Speiser (1941:9) also mentions that “some [Hurrian loanwords] are demonstrable in good Akkadian.” The presence of Hurrian people to the west and southwest of this area is, on the contrary, the result of a short-lived expansion, crushed down by the Hittites and the Assyrians, who also had territorial ambitions. In Wilhelm (1996:181), the parallels between the Syro-Cananean rituals and the Hurro-Hittite rituals on one hand and the deep connections between the Akkadian goddess *Ištar* and the Hurrian goddess Šauška on the other hand are held as strong indications that the Hurrians must have been on the spot and that they must have taken part to the construction of the Mesopotamian civilization *from the start*<sup>3</sup>. A probable etymology of the goddess Šauška, attested in the Ur III period as <ša-ù-ša>, has been proposed by Wegner: this theonym means ‘the Great’, being the equivalent of the great goddess *Ištar* of the Akkadians

Hurrian is closely related to the Urartian language, which was spoken in eastern Anatolia, a little to the north and east of Hurrian, between about 850 and 600 BCE. Urartian is not a descendant of Hurrian; rather, they are sister languages, both going back to a common Hurro-

<sup>2</sup> Cf. Lambert 1982:95.

<sup>3</sup> «dès le début».

Urartian parent language, probably located to the northeast of Mesopotamia in the foothills of the Caucasus Mountains and dated to before the third millennium BCE. Diakonoff (1957:39) concludes that “Urartean is not a late dialect of Hurrian, but a separate language derived from one parent with the latter and in some respects preserving more archaic features than the Hurrian language.” Urartian remained spoken long enough for Armenian to borrow a few words with fairly clear Hurro-Urartian origin. Diakonoff (1961:597) even suggests that the autoethnonym of the Armenians *Haykh* derives from \**Hathyos*, a variant of *Hatti*.

Though attempts have been made to find relatives of Hurro-Urartian (cf., for example, Diakonoff—Starostin 1986), none of these attempts has gained widespread acceptance. For example, the connections suggested in Diakonoff—Starostin (1986:58—59, no. 146; 24, no. 31) between Hurrian *hawurni* and *eše* with Proto-East Caucasian \**qwy?**rV* ‘field’ and \**?ams·V* ‘sky’ are now (all the more) unacceptable because new information has shown that the meanings of *hawurni* [now] ‘sky’ and *eše* [now] ‘earth’ had to be inverted. This inversion is known thanks to the discovery of a Hittite-Hurrian bilingual posterior to Diakonoff—Starostin (1986). According to Speiser (1941:xiii), “the [Hurrian] language has no genetic connection with the major linguistic families or branches of that area, such as Hamito-Semitic, Sumerian, and Hittite. In type and structure Hurrian presents intricate problems of classification and analysis.”

Interestingly, the names of the kings of the Mitanni state were of Indo-Aryan origin, and a number of Indo-Aryan gods (Mitra, Varuna, Indra, Nāsatya) are mentioned in the Mitanni texts, alongside the indigenous gods (cf. Burrow 1973:27—30). The Hittite archives of Ḫattušaš have revealed the oldest known horse-training manual. This work, written ca. 1345 BCE by a Mitanni horse-trainer named *Kikkuli*<sup>4</sup>, contains 1080 lines on four tablets. It begins with the words: ‘Thus speaks Kikkuli, master horse-trainer of the land of Mitanni’. Several Indo-Aryan technical terms for horse training are mentioned in this manual: *aikawartanna* ‘one turn (of the course)’ (cf. Sanskrit *eka-vartana-*), *terawartanna* ‘three turns’ (cf. Sanskrit *tri-*), *panzawartanna* ‘five turns’ (cf. Sanskrit *pañca-*), *sattawartanna* ‘seven turns’ (cf. Sanskrit *sapta-*), and *nawartanna* (for \**nawa-wartanna*) ‘nine turns’ (cf. Sanskrit *nava-*). The word *aššuššanne* ‘horse-trainer’ combines the Hurrian suffix *-anne* with an Indo-Aryan-sounding root *aššušš* (cf. Sanskrit *ásva-ḥ* ‘horse’). Indeed, it was probably the Hurrians who introduced “the light horse-drawn chariot with spoked wheels, the training of horses to draw it, its use as a platform for firing the composite bow, and the development of scale-armour for men and horses to counter it” (cf. Sherratt 1980:125). Another Hurrian text, found at Yurgan Tepe, has *babru* and *pabru-nnu* (cf. Sanskrit *babhrú-* ‘brown’), *parita* (cf. Sanskrit *palitá-* ‘grey’), and *pinkara* (cf. Sanskrit *piṅgalá-* ‘red’). Quite strangely, Diakonoff (1971:78) seems to reject the obvious connections between these words and Indo-Aryan.

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<sup>4</sup> This name bears a striking and intriguing similarity with English *colt* ‘a one-to-four-year-old foal’, Swedish (dialectal) *kult*, *kulter*, *kulting* ‘foal, young man’, Danish *kuld* ‘brood’. The name *Kikkuli* may be a reduplicated form: \**kul-kul-*. Both this term and the English, Swedish, and Danish words may ultimately go back to a Proto-Indo-European \**gul-* (or \**gl-*). This connection has never been suggested before.

## The Main Documents Available Written in Hurrian

The first document written in Hurrian is the letter sent by the Mitanni king, *Tušratta*, to the Egyptian Pharaoh, *Amenophis III*, known in the letter under his royal name *Neb-Maat-Ra* vocalized as <Ni-im-mu-u-ri-i-a>. The item, found in 1887 and referenced as E24, is the only one written in Hurrian in the corpus of El-Amarna letters. Written in the standard cuneiform syllabary, it could easily be read, and it was immediately obvious that it was not written in the diplomatic language in use at that time, Akkadian. A new language was there, which received the name Subarian for some time. In 1932, Friedrich transcribed the letter as a “Subaräisch Text”, but in his next work (published in 1939), he used “churritisch”.

Hurrian was written in the cuneiform syllabary most of time. Unlike Akkadian and Hittite scribal practices, the Hurrian cuneiform texts contain relatively few Sumerograms. The most frequent ones in the Mitanni letter are DINGIR ‘god’, KUR ‘country’, and MEŠ plural marker. Some of the texts from Ugarit (Rās Šamra) are also written in Ugaritic cuneiform alphabetic script. A few words are also attested in Hittite hieroglyphic writing. Because of the diversity of the writing systems used for Hurrian, it took some time at the beginning of the 20th century before people realized that Hurlili, Mitannian, Subarian, and other names were in fact one and the same language. The name Hurrian, with no geographic connotation, gradually became accepted to describe only the language.

More recently, in 1983, a set of six bilingual tablets was unearthed in a temple in Ḥattuša. The second language, written in the right column, is Hittite. And this find has provided considerable new insight on Hurrian. The Hurrian language of the bilingual tablets seems to be fairly archaic, possibly earlier than the 17th century and is older than the Hittite translation, which is dated ca. 1400 BCE. These new texts have been published in 1990 by H. Otten and Chr. Rüster in the XXXII volume of the *Keilschrifttexte aus Boghazköi (Kbo)*.

Hurrian documents are rather rare, unfortunately. It seems that even in the Hurrian-speaking areas, most of the official documents were actually written in Akkadian, because the use of writing was implicitly a use of the Akkadian language as well, somewhat looking like the pervasive use of Latin in the European Middle Ages.<sup>5</sup> Wegner (2007:21—32) lists most of the documents attested in Hurrian, but does not mention a certain number of texts where Hurrian is mixed with a Semitic language. For the time being, there seems to be no thesaurus of all the attestations of the Hurrian language. Wegner (2007:17) cites a “Corpus der Hurritischen Sprachdenkmäler”, but these monographs seem to have an extremely limited diffusion in libraries.

## The Issue of Transliterating Hurrian

As noted by Gragg (2003:255): “Details of phonology are obscured, for both languages [Hurrian and Urartian], by the fact that they are written in an adapted cuneiform script. It seems

<sup>5</sup> Cf. Wilhelm 1996:180. «Ces textes montrent enfin qu’au Mitanni, également, on se servait comme langue administrative d’un akkadien influencé par le hourrite, comme c’est le cas au pays d’Arrapha. L’espérance de retrouver de nombreux textes en langue hourrite en provenance du cœur de l’empire mitannien n’est ainsi plus fondée. [...] Il est donc possible que dans le royaume du Mitanni, sous l’influence de la culture scribale akkadienne dominante, la plupart de la littérature ait été composée en akkadien.»

clear that Hurrian distinguishes two series of stops (but not clearly voiced/voiceless), while Urartian distinguishes three (using the Akkadian ‘emphatic’ row of signs for the third). Both languages seem to make distinctions in alveolar and velar/uvular spirants which are foreign to the languages from which they borrowed the writing system.” It should be borne in mind that the way Hurrian is transcribed is to some extent *conventional* and that the exact phonetic nature of the language is imperfectly or incompletely represented by the different graphic systems. This is especially true for some signs which play an extensive role in the morphology of Hurrian. For example, the same sign stands for *-wi-*, *-wa-*, *-wu-*, and *-we-*. The reasons why decipherers attributed this or that value to each instance of the sign *\*-wV-* are not clear to us.<sup>6</sup> But their conclusions are impressively coherent with the present work. Sometimes, signs with multiple vowel readings are combined, like in Mit. IV 111 <*wə-əh-ru-um-me*>: the vowel here is most probably *\*[a]*, as in <*wahri*> *\*[bayri-]* ‘good, sound’. In spite of the graphic opacity of the cuneiform writing, some features can nevertheless be reconstructed with some certainty. From a methodological point of view, a constant distinction must be made between the readings of the conventional transcriptions and the underlying phonetic or phonological reality of Hurrian. This situation is obviously a difficulty when one tries to compare Hurrian with other languages. Moreover, the different scholars who work on Hittite and Anatolian languages, Akkadian, Hebrew, and Semitic languages do not have the same traditions of interpreting the graphic systems, and this is another source of potential misunderstandings.

The conventions for writing Mitanni Hurrian in cuneiform were the same as for Hittite and the other Anatolian languages. Kimball (1999:53—54) discusses the development of cuneiform writing and the similarities and differences that existed among the various varieties of cuneiform. In particular, she notes the important similarities between Hittite scribal practices and those used by the Mitanni Hurrians. Though some scholars see this as an indication that the Hittites adopted cuneiform from the Mitanni Hurrians, other scholars (Gamkrelidze, Kammenhuber) suggest that the Hittites adopted it instead from a North Syrian source.<sup>7</sup> It can be noted that Hurrian people also inhabited North Syria. The transmission in all cases probably happened through two different writing schools, both being Hurrian-speaking and ultimately of Akkadian and Assyro-Babylonian origin.

The writing system distinguished between medial single writing of consonants and medial double writing. It is not perfectly clear what phonological features this system actually distinguishes. Laroche (1980:22) assumes that single writing was the means by which voiced consonants were distinguished and that medial double writing was the means by which voiceless consonants were distinguished. This is confirmed by the Ugaritic alphabet where the opposition between voiced and voiceless phonemes is unambiguous.<sup>8</sup> An example is *Teššub* in the Nominative and Dative cases: *Teš-šub* versus *Teš-šup-pe*, respectively, [t ɻ b] ~ [t ɻ p] in the

<sup>6</sup> Friedrich (1932:9) explains that he chose the vowel according to the following syllable. Otherwise he wrote <*wə*>, which is what Thureau-Dangin had done before.

<sup>7</sup> See also Gelb 1961.

<sup>8</sup> «L’écriture alphabétique de Ras Shamra apporte un précieux concours; elle seule, en effet, permet de discriminer sans hésitation les sourdes et les sonores. Elle a confirmé l’opposition pertinente de *p* à *b*, de *t* à *d*, etc., que les syllabaires occidentaux représentent par l’artifice de la gémination: *-bb-* ou *-pp-* = *p*, en face de *-b-* ou *-p-* = *b*, *-tt-* = *t*, etc.» Cf. Laroche 1980:22.

Ugaritic writing. The opposition is coherent with the Indo-Aryan names of kings: *Artatama* stands for *rta-dhāman*, while *Tušratta* reflects *tveṣā-rathā*.<sup>9</sup> Laroche (1968:528) credits this theory to Speiser.<sup>10</sup> This approach is, indeed, developed in Speiser (1941:35—36). This system of single versus double writing of consonants is used in Nuzi, Boğazköy, and the Mitanni letter. Speiser (1941:40—41) further adds that, in Mari, there is a consistent opposition between voiced and voiceless cuneiform signs of a different type, but the distinction still exists. It can be noted that even those who oppose the existence of a voice contrast in Hurrian nevertheless agree that “Mitanni orthography is extremely consistent, particularly in the representation of consonantal length.”<sup>11</sup> The issue is, therefore, more about establishing what this gemination or supposed “length” stands for from a phonological point of view. The existence of a contrast of whatever nature is uncontroversial.

There is no indication that Hurrian may have had aspirated, emphatic, or glottalized phonemes. The cuneiform syllabary used to write the Mitanni letter has eliminated all the signs involving emphatics in writing Hurrian. The only one transcribed by Friedrich in 1932 is <ṣu> \*[tsu]. None of the emphatic letters of the Ugaritic writing is used in Hurrian words and names. The only instance is the name of the goddess Dakiti [d q t] of Semitic origin, which Ugaritic scribes wrote in the Semitic way. Diakonoff (1971:41) states that there is one attestation of <ṣ> in Ugaritic Hurrian but does not provide any examples or any references.<sup>12</sup> Furthermore, the loanword of Akkadian origin *māṣṣar* ‘protection’ is written [m ɬ r ɬ l] ‘protector’ in the Ugaritic alphabet, which suggests \*[mazaruylī] as the underlying phonetics. This word tends to show that Semitic emphatics were adapted as voiced phonemes in Hurrian, because Hurrian did not have any other equivalent for emphatics. Another example is *ezaduhlu* ‘harvester’, probably a loanword of Akkadian *esēdu* ‘harvesting, harvest’ with the Hurrian suffix<sup>13</sup> -uhlu ‘in charge of’. Transcriptions from cuneiform are written between brackets (<>), and attempts at phonetic reconstructions are indicated by \*[ ]. For example, the word *Mitanni* [conventional] was written <mi-it-ta-an-ni> [cuneiform] and may have been pronounced \*[mi(:)tan(n)i]. As will be shown later on, Hurrian had only three vocalic phonemes: \*/a/, \*/i/, and \*/u/. One of the problems with Hurrian is cuneiform <e>. In most cases, <e> alternates in writing with <i>, and this clearly points at \*/i/ as the underlying phoneme. In some cases, <e> can be shown to stand for \*/a/. An instance of <e> standing for \*/a/ is *šarri* ‘king’ and *šerri*, *šerši* ‘throne’, attested metonymically for ‘king’. The meanings are so closely related that *šerri* must be the same as *šarri* and *šerši* must be a derivative of *šarri*. In some words like *šeni* ‘brother’, <e> is never attested as <i>, which may well indicate that the underlying phoneme in *šeni* \*/sani/ is \*/a/. Some transliterations like *Teššub* or *Heba* are traditional. They stand for \*[ti:sub] and \*[xi:ba], but it seems difficult to change them. In most cases, the Hurrian words will be written in the conventional way exemplified in Laroche (1980) or in Neu (1988).<sup>14</sup> Laroche followed the

<sup>9</sup> This word is attested as <<sup>m</sup>Tu-i-ša-rat-ta-a>, but the Mitanni letter has <Du-uš-rat-ta-a>.

<sup>10</sup> «...les nouveaux textes confirment largement la doctrine de Speiser, selon laquelle les sonores et les sourdes intervocaliques de l'alphabet répondent à des graphies simples et géminées dans les syllabaires de Boğ., RS et Mit.»

<sup>11</sup> Bush 1964:277.

<sup>12</sup> “Ugarisch-Hurr. kennt ein [.” The examples are, in fact, obscure, as noted by Bush (1964:57—58). None of the words is clearly Hurrian in the first place.

<sup>13</sup> Speiser (1941:130) suggests that this may be the verb *ehli* ‘to save, oversee’ used in a particular way.

<sup>14</sup> The conventions in Neu (1988) are nearly identical to those of Laroche (1980).

conventions developed by Labat, ultimately traceable to Deimel. These conventions are the common ground for all languages written in cuneiform script, and there is no reason to depart from this shared heritage, which also facilitates comparison with Anatolian languages. When graphic variants make it possible, *<e>* is either transcribed as standing for \*/i/ or \*/a/. Undecidable cases are written with *<e>*.



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## Phonology, Writing Systems, Texts

### A Sketch of Hurrian Phonology

As noted by Diakonoff (1971:40):

Die Erforschung der Phonetik und Phonologie alt-schriftlicher Sprachen, insbesondere der in einem so komplizierten Schriftsystem wie dem in der Keilschrift fixierten, ist sehr schwierig; sogar Methoden, die streng genug wären, um das Graphische gegenüber dem Phonetischen und das Phonetische gegenüber dem Phonologischen zu unterscheiden, sind bisher nicht erarbeitet worden; um das Vorgehen der Forscher auf diesem Gebiet ist leider nicht von Intuition und Subjektivität frei.

The last sentence is especially worth pondering when it comes to Hurrian.

Laroche (1980:23—24) proposes the following phonological system for Hurrian:

	Labial	Dental	Affricate	Palato-alveolar	Velar (stops)	Velar (fricatives)
Voiced	b	d	[dʒ] <z>	[z] <ž>	g	γ
Voiceless	p	t	[ts] <s>	[s] <š>	k	x
Nasals	m	n				
Liquids		l, -r-				
Semivowels	w			y		

This system can be described as being the one with the fewest phonemes possible. Data indicate that the actual Hurrian system must have been richer, but Laroche (1980) adopted a prudent profile and did not assume uncertain hypotheses.

Hurrian had at least an opposition between: (1) labial ~ dental ~ velar; (2) stop ~ fricative ~ affricate; and (3) (probably) voiced ~ voiceless. Minimal pairs are for /k/ ~ /g/, /z/ ~ /s/, /p/ ~ /b/:

- a) *maganni* \*[magani] ‘gift, present’ ~ *Nikkal* \*[nikal] ‘the goddess Nikkal’  
Ugaritic script: [m g n] ~ [n k l]
- b) *Kušuh* \*[kuz(u)γ] ‘Moon-god’ ~ *Teššub* \*[ti(:)sub] ‘Teššub (Abs.)’  
Ugaritic script: [k ɬ/z ɣ] ~ [t t b]

c) *Hebat* \*[xi(:)bat] ‘the goddess Hebat’ ~ *Tesšuppe* \*[ti(:)supi] ‘Teššub (Gen.)’  
 Ugaritic script: [x b t] ~ [t t p]

The consonants /l/ and /r/ are extremely rare word-initially. It is possible that Hurrian did not allow these phonemes to appear word-initially. The loanword *Rešep* is written as [i r t p] in Ugaritic with a prosthetic [i-]. Moreover Varuna (or maybe \*Ruvana ?) is attested as Uruwana, with a prosthetic [?u-].

As regards /n/, there are several instances of [n n] in Ugaritic writing standing for the Hurrian definite article for plural <-nn->, which suggests that the graphic gemination stands for a real geminate \*/nn/ contrasting with a simple \*/n/ in the singular.

Laroche suggests that the phonemes conventionally written <š> and <šš> may have been dental fricatives [ð] and [θ]. In the Ugaritic script, this is indeed the way they are transcribed most of the time. The god Kušuh is written either [k d ɣ] or [k z ɣ] \*[ku(d)zy]. The simplest explanation is that they represent the sibilants \*[z] and \*[s] and that they were pronounced in a specific way — laminal more than sibilant — that made them sound closer to the dental fricatives than to the sibilants of the Semitic languages.

Laroche also mentions the possible phonemes /f/ and /v/, in addition to /w/, but he does not use them in his transcriptions. These phonemes have been proposed to account for graphic alternation between <p> and <w> in some words, like *pandi/wandi* ‘right-side’. This alternation happens word-initially or in reduplicated words like *paban/wawan* ‘mountain’. The word ‘mountain’ is written [p b n] in Ugaritic, in a way that does not give a clear indication. This may just reflect an inadequate notation for initial /b/ or a dialectal devoicing of initial \*/b/. It can be noted that the Urartian cognate is *baba* ‘mountain’. The possible existence of \*/f/ or \*/v/ is a major issue in Hurrian studies. Two schools of thought in Hurrian studies can be identified. One school rejects \*/f/ and \*/v/; the other school promotes \*/f/ and \*/v/. The reasons to reject these phonemes are manifold:

1. The alternation detected in Hurrian texts exists in Assyro-Babylonian texts. There is a widespread confusion between \*/w/, \*/b/, and \*/m/ in late Assyro-Babylonian. The *incipit* of royal letters is written either <amat šarri>, <abat šarri>, or <awat šarri>. There is no doubt that these writings can only stand for \*[awat šarri] ‘Here are the words of the king’. This has been known for more than seventy years.<sup>15</sup> The graphic alternations that are supposed to substantiate Hurrian \*\*/f/ and \*\*/v/ should logically entail the same alternations to exist in Assyro-Babylonian. The knowledge we have of Proto-Semitic and Semitic languages precludes such erroneous conclusions and non-existing phonemes. And they henceforth preclude the same absurd conclusions for Hurrian.

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<sup>15</sup> Thureau-Dangin in Schaeffer (1931): «L’emploi de b pour w, qui suppose une prononciation spirante du b, est attesté de bonne heure en pays d’Accad, mais seulement à l’état sporadique (voir Homophones Sumériens, p. 51). Ainsi les lettres des Sargonides rédigées en babylonien commencent uniformément par a-mat šarri, tandis que la plupart de leurs lettres en dialecte assyrien débutent par a-bat šarri; lire dans les deux cas a-wat šarri ‘parole du roi’. Les Hurrites en employant b pour w n’innovaient donc pas.»

2. The near fusion of /b/, /w/, and /m/ in Cuneiform Assyro-Babylonian is confirmed by attestations in Greek. The goddess *Damkina*, also written as <tab-ki-na><sup>16</sup> in Cuneiform, is attested as Δαύκη in Greek. Even Speiser (1941:42) notes that situation: “But syllabic *w* alone is not automatic evidence for [w] because of frequent inter-syllabic variation between *w* and *p/b*.” — hereby unwittingly refuting his own theory...
3. Stating that <ú> in cuneiform transcription could ever stand for [v] or [f] is hard to believe in the first place. In Akkadian <ú> most often works as a device to write the long vowel \*/u:/: *ma-hir i-na áli i-ba-šu-ú* ‘the price that exists in the town’ in Schaeffer (1931:238). The same is true in Hurrian <hi-su-ú-hi>, which is the plene writing of <hi-su-hi> ‘to vex, annoy’. Interpreting <-wu-ú-we> as being \*\*[-fu-ve] is incoherent with the rules of the graphic system in the first place.
4. Moreover, <ú> can appear word-initially in Hurrian texts: how is <#ú-ša-e#> to be read in the theory that holds <ú> to stand for \*/f/ or \*/v/? This word <#ú-ša-e#> is written on the *same* line of the quadrilingual tablet as Akk. *i-ba-šu-ú* in Schaeffer (1931:238). In the Mitanni letter, there is even an instance of initial <ú-ú-na-> (MI I 108). The consonantic interpretation of <ú> makes no sense at all. <ú> can only stand for a vowel. The issue of the difference between <u> and <ú> will be discussed below with the presentation of the Mitanni letter.
5. The Genitive of *älami* ‘oath’ is attested as <e-la-mi-ni-e> \*[älamini] instead of the regular form <e-la-mi-ni-we>. The glide /w/, and even /b/, are sometimes pronounced [j] as shown by *abi* ‘face, front’ and the variant *aye*.
6. The way Indo-Aryan king names are written also displays inconsistency in the graphic rendition of Indo-Aryan /b/ and /v/: *Biridašwa* <*Bṛhadaśva*- but *Birasena* <*Vīrasena*-.
7. Another case of alternation is <hi-ya-ru-un-na> = <he-pa-ru-un-na> ‘gold’ cited in Speiser (1941:25), which points to an etymon \*[xibar-]. The spirantization of \*[b] has evolved to the point of yielding an assimilation to \*[j] with the preceding vowel -i-, as in <si-we> = <si-ye> ‘water’.<sup>17</sup>
8. Another example is listed in Speiser (1941:58): “The interchange of *m* and *w* in proper names, e.g., *A-ga-ma-di-il* N.522.17 for the common *Agawadil* (HSS V passim) and *Ar-Šamuška* (N 76.25, 412.8) alongside *Ar-Šawuška* (N 242.20, 267.26), is of orthographic and not phonologic origin.”
9. Further examples from Speiser (1941:62) are shown in Person names: *Ta-di-ba-bu* < \*[tadi-b-abu] (PBS II part II 84.7), *A-gi-ba-bu* < \*[abi-b-abu] (SMN 3082) but *Zi-li-pa-dal* < \*[tsili-b-adal] (HSS IX 113.2) and *Pu-ut-ti-ma-da-al* < \*[puti-b-adal] (RA 16.161 rev. 13). The verb ending is \*-b in all cases — these are just graphic and fictitious alternations.
10. Hurrian is attested for more than a thousand years, and there is a pervading tendency toward the spirantization of \*/b/ into \*/w/ in the language and its attestations. For all these convergent reasons, we consider the view that assumes \*\*/f/ and \*\*/v/ in Hurrian to be

<sup>16</sup> Speiser (1941:19) also cites <dab-ki-in-na> XXVII 42 rev. 13.

<sup>17</sup> These examples make the usual reading of <ti-wV> ‘word, thing, deed’ as \*<ti-we> extremely strange at first glance. In that position, \*[w] should not remain. The explanation is that the original structure was \*[tiH<sub>1</sub>-w-i] (compare Proto-Indo-European \*dheH<sub>1</sub>-). The phoneme \*/w/ is protected by the former presence of a laryngeal in that word.

definitely false. The refutation of this theory has been documented for at least eighty years, and it is just amazing that it can still be accepted in recent works.

Our analysis is that the opposition between /b/ and /p/ is neutralized word-initially, so that ‘mountain’ is [paban] but in syntagms like ‘the god of the mountains’ <eni pabanhi>, we have [i:ni babanyi]. Moreover, it seems that the phoneme \*/b/ had at least two allophones [w] and [b], and this allophony may have a relationship with the position of the accent. *Kumarbi* is attested as both [k m r b] and [k m r w] in Ugaritic script. This may explain alternations like *ku-ú-wa-hi* (KUB XXXII 84 IV 9) ~ *ku-pa-a-hi-ni-el* (KUB XLVII 56 RO 13), which may stand for \*[kúbayi] ~ \*[kubáyinil]. “Inverted” alternations also exist: *He-e-pa-at-te* ~ *he-wa-a-at-te-na*, which stand for \*[xíbati] ~ [xibátina].

From the Hurrian point of view, the phoneme /w/, written as [w] in Ugaritic, was phonologically voiceless. The feature accounts for the alternation *b/p* in the name of Teššub. There is no support in the documentation for a complex system with /w/, /f/, and /v/ at the same time, in addition to /b/. The graphic alternations can be handled with only two phonemes /b/ and /w/, which display a phonetic allophony between [b] ~ [β] and [w] ~ [f] respectively. The difference between /w/ and /f/ is more a matter of convention than a real opposition in the language. The Genitive morpheme is written <w> in Ugaritic: *ámr-w* \*[Amuri-wi] ‘of Amurru’; *úgrt-w* [Ugarita-wi] “of Ugarit”. The theory that this morpheme was a consonant like /v/ or /f/ is contradicted by examples in cuneiform writing: *al-la-nu-u-e-ni-iš* \*[alla-n-ui(:)-nis] ‘that of the lady (Erg)’. Only a glide like /w/ can be resyllabicated as a vowel [u].

The opposition between voiced and voiceless phonemes seems to be neutralized in a certain number of environments. Word-initially, only voiceless letters are attested. In Ugaritic writing, the only words with voiced initials are Semitic loanwords. After /r/, /l/ and /n/, it seems that only voiced phonemes existed. Elsewhere, and especially intervocally, the distinction between voiced and voiceless phonemes is clearly attested.

Laroche (1968) notes that there is a consistent distinction in Ugaritic writing between /d/ and <š>, which he writes as <ž<sub>1</sub>> and <ž<sub>2</sub>>. But he does not try to make any inference out of this distinction, and his later works do not take this into account. The Hurrian plural displays a graphic allomorphy between <-ll-> and <š>. In the Ugaritic writing, the plural is written with /l/. If we follow the logic of geminate writing in cuneiform, then <-ll-> should stand for a voiceless lateral, contrasting with a voiced lateral /l/. The Ugaritic writing is unfortunately ambiguous, as <š> may still have been a lateral fricative as in Proto-Semitic (and Hebrew) or be /š/. Hurrian may have had lateral fricatives in its system. The graphic allomorphy between <-ll-> and <š> may be hiding a single morpheme \*/l/ “plural”, written in two divergent ways. In that case, Hurrian had two lateral fricatives: voiced \*/ʒ/ and voiceless \*/ʃ/. Potential examples of the voiced lateral are <Alašiyahi> Ugaritic [á 1 š y ɣ] \*[Alažiyayi] (?) ‘Cypriot’, <eše> Ugaritic [í š] \*[i(:)ʒi] (?) ‘earth’ (originally thought to mean ‘sky’ as in Laroche [1980], but the bilingual text discovered in 1983 proved this meaning to be erroneous; <hawurni> translates Hittite <ne-pí-iš> ‘sky’). The clearest example of voiceless laterals seems to be the plural. The example of Išhara, written [í ɬ ɬ r] or [ú ɬ ɬ r] in Ugaritic script, is ambiguous, as the fricative may have been devoiced by the neighboring \*[x]. This means that cuneiform <š> can stand for \*/s/, \*/z/, and also \*/ʃ/ and \*/ʒ/. These values may be true for other languages than Hurrian written in

cuneiform. As noted in Friedrich (1932), the old and secret name of the Urartian people, from the profane *Urarṭu*, is based on the name of their god *Haldi*, which accounts for their name as *Chaldeans*.<sup>18</sup> This word has a conspicuous trace of a lateral fricative in Hebrew: *kaśdîm* [כָּשְׁדִים] ‘Chaldeans’, with the letter *sin* [š] corresponding to the <-l-> of other languages. This is an important signal that Urartian and Hurrian indeed had lateral fricatives. Another intriguing pair of words is: *Nulahē* ‘Lullubian’ and *Nuzahē* ‘Nuzian’, which may be graphic or phonetic variants of the same word. The Genitive case is attested as KUR *Lu-lu-ú-e* and KUR *Nu-ul-lu-e* for both places in Speiser (1941:52). The Akkadian equivalent is *Lulli?atun*, where -ll- corresponds to -l- ~ -z-, confirming that this is not a simple lateral. Another option is to posit \*/š/ and \*/ž/ as in Diakonoff (1971). In the rest of the document, we will write <š> and <ž> to signal the items where these lateral fricatives may exist. A last remark is that the name *Urarṭu* is attested as Babylonian *Uraštu* according to Neu (1988:33), which suggests that this kind of fricative could exist in Urartian as well.

The existence of an opposition between affricates and sibilants is confirmed by some Armenian words with clear Hurrian-Urartian origin. Examples of affricates are *caray* ‘slave’ ~ Subarian *sarre* \*[tsari] ‘booty’; *car* ‘tree’ ~ Urartian *ṣare* \*[tsari] ‘orchard’; *cov* ‘lake’ ~ Urartian *ṣue*, *ṣowi* \*[tsuwi]. An example of sibilant is *sur* ‘sword’ ~ Urartian *ṣure* \*[suri] ‘weapon’.

The correspondences between Hurrian and Urartian seem to be:

- a) Hurrian š ~ Urartian š: \*/s/ and \*/z/
  - Teššub: Hurrian \*[ti(:)sub] ~ Urartian <teeišebaa> ~ Ugaritic [t t b]
  - ‘elder’: Hurrian \*[tizayı] ~ Urartian <teš> ‘elder’ ~ Ugaritic [t z ǵ]
  - ‘weapon, sword’: Hurrian \*[sa(?)uri] ~ Urartian <ṣuri>; Armenian *sor* ‘sword’
- b) Hurrian s ~ Urartian ṣ: \*/ts/ and \*/dz/
  - ‘tree’: Subarian <sarme> ‘forest’ ~ Urartian <ṣare> ‘orchard’ ~ Armenian *car* ‘tree’
  - ‘to rejoice’: Hurrian <pi-su> \*[pidzu] ~ Urartian <piṣ><sup>19</sup>
- c) Hurrian š ~ Urartian s/ṣ: \*/š/ and \*/ž/
  - ‘daughter’: \*[šala] : Hurrian <ša-la> ~ Urartian <selaa><sup>20</sup>
  - ‘earth’: Hurrian <e-še> \*[iži] ~ Urartian <eši>

The Ugaritic writing indicates that the goddess Anat, of Canaanite origin, was \*[šanat] with šayin. There is another instance of that letter in the obscure word [t š n]. This is not a sufficient basis to posit that Hurrian may have had pharyngeal phonemes.

Another issue is the possible phonemic existence of glottal stop \*/ʔ/. Ugaritic writing distinguishes three alephs, which are conventionally transcribed [á], [í] and [ú]. There are several instances of these alephs word-internally, contrasting with either [y] and [w]. The goddess Šauška is written [t ú t k] and this suggests \*[saʔuska]. This can be compared with the god Ea, written [í y] \*[i:ja], where the hiatus between the vowels is filled by a glide. There is

<sup>18</sup> This word was later attributed to the Assyrians.

<sup>19</sup> These examples suggest that the interpretation of <ṣ> as standing for a glottalized phoneme is probably erroneous. Urartian opposes voiced and voiceless phonemes in the same way as Hurrian. As indicated in Diakonoff (1971:25) Urartian <ṣ> is an affricate [ts].

<sup>20</sup> This word seems to be the only instance of an alternation Hurrian <š> ~ Urartian <s>.

also an instance of *i* in the obscure word or syntagm [t z i r p n m]. The presence of \*/?/ seems probable, but it must be noted that there is also the case of Šauška [t w t k], with no aleph. Speiser (1941:19) dismisses the evidence of <<sup>d</sup>Te-eš-šu-ub-?a-ri> (VS VII 72.10) and of <a-a-i-i-e-e> Mit. IV 50, which he proposes to interpret as \*[aje]. We will show below that this is most probably \*[ā?i?i]. The comparison of *Arip-atal* with *Arip-huppi* in Gelb (1944:114) is also a powerful clue that a glottal stop prevents the connection between *p* and the next (?)*a*.

As regards geminates, [nn] is attested in Ugaritic script for the plural article <-nn->. The graphic geminates <-rr> and <-ll> resulting from the assimilation of *-r-* and *-l-* with the singular article *-ni* are most probably phonetic geminates. The case of the Absolutive plural <-lla> may not be a geminate but a voiceless fricative. As for <-mm->, the case of *suni* and *summi* ‘hand’ suggests that *summi* is *sun=mi* with assimilation to the suffix *-mi*. This is most probably a phonetic geminate. As noted above, graphic gemination is a device to indicate voicelessness, but it is possible that, in some cases, morpheme boundaries resulted in phonetic geminates. Potential examples are: (1) *-ittu*, *-itta* ‘P3 pl. + future’, which can be analyzed as \*-id=ta, \*-id=tu; (2) *-tta* ‘P1sg. + Abs.’, which can be analyzed as \*-t=wa. Phonetic gemination appears only at morpheme boundaries.

On this basis, we would propose the following phonological system for Hurrian:

	Labial	Dental	Affricate	Palatal	Liquids	Velar	Glottal
Voiced	/b/	/d/	/dz/	/ǵ/	/l/ /ll/	/g/	
Voiceless	/p/	/t/	/ts/	/s/		/k/	/?/
Voiced		/z/			/r/ /rr/	/γ/	
Voiceless		/s/				/x/	
Nasals	/m/	/n/ /nn/					
Glides	/w/			/y/			

A final remark on the consonants is the tendency of Hurrian “laryngeals” (/γ/, /x/ and /?/) to mute out. The word ‘Egypt’ is attested in the Mitanni letter as <Ma-a-áš-ri-a-a-ni> Mit. II 69 and <Ma-a-áš-ri-a-an-ni> Mit. II 71, which suggests \*[ma:sri?a?] with two different treatments of the final glottal stop: vowel lengthening or gemination. The word *šuhuri* ‘life’ is also attested with writings like <šu-ub-ri> or <šu-ú-ri> \*[suwri] with no <h>.

Laroche assumes that Hurrian had the following vowels: /i/, /a/, /u/; he does not exclude that /e/ and /o/ may have existed, but none of the writing systems used for Hurrian can provide any support for the existence of /e/ and /o/. It is well-known that the cuneiform system is not far from being hopelessly unable to denote this distinction, even where it may have existed. It can be noted that *tan* ‘to do’ (< \*dheH<sub>1</sub>-) and *taše* ‘gift’ (< \*doH<sub>4</sub>-) are both written with *-a-*.

This triangular system /i/, /a/, /u/ is typologically frequent. Apparently, as shown by the Hebrew and Greek rendition of the word *huruhe* ‘Hurrian’, the phoneme \*/u/ in Hurrian must have been rather open and sounded like \*[o]. As regards the phoneme \*/a/, it seems to be fairly anterior and close to \*[æ/ɛ]. An instance of <e> standing for <a> is *šarri* ‘king’ and *šerši*,

‘throne’, attested metonymically for ‘king’. Other examples are listed below. The phoneme \*/i/ was probably open \*[e:] when uttered long and is often written with <e>. As regards the issue of <e> not alternating with <i> and possibly standing for the phoneme \*/a/, it can be noted that this feature occurs primarily when the following consonant is \*/l/, /n/ or \*/r/: *šerri, šena, ela, elami, kel(di), nera*. The only exception is \*eše, unless this is in fact \*äši with \*[ʃ]. This tends to show that the phoneme \*/a/ was considerably fronted when followed by a resonant. In that position, <e> is an allophone of \*/a/. It seems reasonable to write *šärri, šäna, äla, äلامي, käl(di), nära*.

Laroche does not address explicitly the issue of vowel length as a phonemic feature (see also Diakonoff—Starostin 1986:15). There are examples of plene writing in Hurrian. This suggests that length, as a phonetic feature, may have existed in Hurrian. As in the other Anatolian languages, plene writing is not consistent. This feature is not taken into account in Laroche’s *glossaire*, which has all vowels written as short. The inconsistency of plene writing is probably a structural feature of the graphic system in the first place, but it may reflect a feature of Hurrian as well. There are some instances of vowel alternation which suggest that Hurrian may have a mobile accent. For example, *ahri* ‘an incense’ becomes *aharri* ‘the incense’. An internal reconstruction of the system could be:

- a) **ahri** <a-ah-ri> Proto-Hurrian \*áhari;
- b) **aharri** <a-ḥa-ar-ri> Proto-Hurrian \*ahári-ni, with -ni ‘definite article’.

This example strongly suggests that Proto-Hurrian accent was antepenultimate in this word and that unaccented penultimate vowels were likely to be lost. A possible explanation for the instability of plene writing and alternations between <b> and <w> is that accent was mobile. The place where accent fell triggered vowel shortening or lengthening as well as strong or weak allophones of /b/ and /w/. Other examples are *kabli* > *kaballi* ‘copper’, *tabli* > *taballi* ‘metal-melter, smith’. With another vowel, *šuhni* > *šuhunni* ‘wall’.

Diakonoff (1971:32) interprets the multiple writings <še-e-ha-li, še-ha-a-la-, še-ha-la-a-, ši-ha-a-la-> ‘clean, pure’ as possibly being an “unbestimmter reduzierter Vokal”. We interpret this as a clear sign that vowel lengthening is not phonemic but depends on the syllable where the accent falls. Diakonoff proposes reduced vowels in Hurrian and Urartian but there is no clear support for this hypothesis. For example, what is the rationale for \*[kuzəy] Kušuh? Speiser (1941:16) suggests that the Moon-god may in fact be \*[kuzy], as shown by the alternation <<sup>d</sup>Ku-ú-šu-uh> and <<sup>d</sup>Ku-ú-ša-ah>. There was no adequate and direct way to write a final cluster [-zy#] in cuneiform.

If we accept the hypothesis that Hurrian accent was antepenultimate in a certain number of words, then the presumption that glottal stop was a phoneme is reinforced.

- a) <e-ba-ni-i-e-de> \*[ibani?idi] ‘toward the land’
- b) <ha-ša-a-ši-we-al-li-i-il-la-a-an> \*[xazáziwi-?alíla?an] ‘may I not hear of her’
- c) <ša-a-la-pa-an aš-ti-ip-we-u-un-na ari> \*[šálaban astiwú?un(n)a ari] ‘give (me) your sister as wife’
- d) <še-e-ni-ip-we-u-e-ma-a-an ge-el-ti ha-ši-i-i-le> \*[síniwú?imán kildi xazíjili] ‘and may I hear of my brother’s health’

The apparent plene writing may stand for different syllables separated by glottal stops.

The prosody of Hurrian seems to be fairly complex, and several kinds of alternations of plene writing can be detected. Different classes of words exist:

- a) Antepenultimate mobile accent: \*[áh(a)ri], \*[éh(e)li], \*[íw(i)ri], \*[Híbat(i)], \*[hawúr(u)ni], \*[kúpayi], \*[úmini], etc. In these words, plene writing moves and (pen)ultimate vowels tend to fall. When the definite article *-ni* is added, the accent moves on the next syllable.
- b) Fixed initial accent: \*[íni], \*[súhuri], \*[tádarask] etc. In these words, plene writing is kept even when morphemes are added and a syntagm longer than three syllables is created. When the definite article *-ni* is added, the accent remains on the first syllable.
- c) Penultimate accent: \*[allunúxi], \*[allúmmi], \*[halpáyi], etc. This seems to be the typical pattern of derivative adjectives. Many Semitic loanwords, with a long second syllable, seem to be integrated in the Hurrian language with this pattern.
- d) Fixed final accent: \*[tarzuwá], etc. Plene writing remains on the last syllable.
- e) Mobile accent: \*[atta], \*[tiza], etc. In these words, the accent seems to be initial in the Nominative (and Ergative) and final in the other cases (\*áta > \*atá-).

The prosody of verbs is very hard to interpret and requires further investigations. An intriguing case is Mit. III 81 <ta-a-ni-a> ‘he does it’ ~ Mit. I 85 <ta-a-a-nu-u-sha> ‘he did it’. This clearly suggests a reconstruction \*[tá?nia] ~ \*[ta?ánu:sa] (< \*dheH<sub>1</sub>-). The laryngeal is still there. The accent is probably mobile in some verbal forms as well.

A remarkable feature of the Hurrian-Hittite bilingual from Boğazköy is its poetic and metric structure. This seems to have remained unnoticed so far, but the Hurrian text is written in something that is highly reminiscent of dactylic hexameters, as can be evidenced by this section in KBo 32. 15 Vo IV:

- < 8. ti-wu-uš-hi-ni ha-ši-im-ma <sup>m</sup>Me-e-ki-né-ella >  
X -- : X X X : -- X : -- X : -- X
- < 9. a-li-nu-um (:) “u-uh-ni <sup>m</sup>Me-e-ki” i-ši-ik-ku-un-na >  
X X X : X -- : X -- : X X X : -- X
- < 10. <sup>d</sup>IM-ub-pa ú-ku-ul-ga-ri u-ri<sup>21</sup>  
-- X : X X X : X X X : X
- < 11. (Empty)
- < 12. <sup>m</sup>Me-e-ki-né-e ti-bé-na <sup>d</sup>IM-ub-u-ta >  
-- X : -- X : -- X : -- X : X X
- < 13. ku-un-zi-ma-i ka4-ti-ya ha-ša-ši-la-ab >  
-- X : -- X : -- X X X : X X X

<sup>21</sup> The verbal suffix *-gar-* is the dual: ‘two legs’, and in the Mitanni letter, Tušratta and Amenophis III are two. Note that *uri* ‘leg’ remains in the singular form.

- < 14. <sup>d</sup>IM-ub <sup>URU</sup>kum-mi-ni-i-bi da-la-a-wu-ši eb-ri >  
 -- x : x x x : x x x : -- x : -- x

The paragraph means: ‘8. And Meki, on hearing the order, 9. whining about it: ‘woe on Meki’, said he, 10. he bends his two legs toward Teššub, 11. (empty), 12. Meki these words toward Teššub, 13. remaining knelt down, says: ‘May you hear, Teššub, strongmost lord of Kummi’. A possible conclusion is that the Hurrians may have invented the dactylic hexameter poetry. This clearly supports the idea that Hurrian had long and short vowels, at least at the phonetic level.

The vocalic system retained for Hurrian is:

\*/a/ [a<=>ɛ]

\*/u/ [u<=>o] \*/i/ [i<=>e]

### Another Approach to Hurrian Phonology

A completely different approach is represented by Wilhelm (2004a:98) and Wegner (2007:46). According to this tradition of decipherment of Hurrian, which originates with Bork for both the consonants and the vowels, and continued by Speiser only for the vowels, Hurrian did not have a phonemic distinction between voiced and voiceless stops and fricatives and had an opposition between /p/ and /f/. However, Wilhelm maintains that there was a non-phonemic distinction according to which voiceless allophones appeared: (1) initially; (2) between vowels when doubled; and (3) when in contact with other consonants except nasals and liquids. In all other positions, voiced allophones appeared. Thus, Wilhelm’s system may be represented as follows (the allophones are shown in brackets):

	Bilabial	Labiodental	Alveolar	Palatal	Velar
Stops	P [p, b]		T [t, d]		K [k, g]
Affricate			ts		
Fricatives		F [f, v]	S [s, z]	Š [š, ž]	H [h, ɣ]
Nasals	m		m		
Liquids			l	r	
Semivowels	w			y	

The Ugaritic alphabet shows unambiguously that there was a two-way opposition in Hurrian, most probably voiced ~ voiceless. “Conclusive proof of the dichotomy of stops in Hurrian is furnished by the alphabetic texts where the series *b d g* is used alongside *p k t*” (Speiser 1931:36). In light of Hurrian as written in Ugaritic script, this view is untenable, and even cuneiform script contradicts this approach as seen above.

Wilhelm (2004:99) assumes that Hurrian had the following vowels: /i/, /e/, /a/, /o/, /u/, and that vowel length was phonemic. The suggestion in Wilhelm (2004:100) that “Hurrian

seems to have a stress accent which falls on the penultimate syllable (including their suffixes), enclitics not counted” does not seem reliable either. The real situation seems to be much more complex.

As discussed above, there is no real support for the existence of /f/ (or /v/) nor for /e/ and /o/ in the available documentation. Speiser (1941:19) states that “the value *e* is assured [sic] for the Hurrian texts by RŠ [i n] ‘god’ = *eni, enna*” and that “the Ras Shamra alphabet was capable of indicating *a, i/e, and u.*” The logic is circular. Moreover, some alternations between <a> and <e> clearly indicate that the vowel /a/ was significantly anterior in Hurrian to the point of sounding like [e]: Mit. I 13 <i-nu-ú-me-e-ni-i-in> = Mit. IV 108 <i-nu-ú-ma-a-ni-ni-i-in>. The same phenomenon is attested in cuneiform at Nuzi: <E-kam-a-šu> = <E-kam-me-šu>. This is noted as *frequent* by Speiser (1941:20) and quite strangely, Speiser fails to see that this alternation actually proves that there was no phoneme \*\*/e/ in Hurrian. Another example is *telamae* for *talamae* in Laroche (1980:251). Another interesting remark is made by Purves in Gelb—Purves—MacRae (1943:189): “Some light can be thrown on thematic vowels by investigation of their phonetic behavior. Interesting but of minor [not for us (!)] importance is their retrogressive influence on preceding vowels in closed syllables. Thus the root or stem *ith-*, formally preserved in *ithi, ithip, ithum*, becomes *uth-* in *uthap*, where the thematic vowel is not *i* or *u* but *a*. It is suspected, therefore, that the root or stem *šahl-*, occurring exclusively with the thematic vowel *u*, is actually a variant of the root or stem *še hl-*, occurring with the thematic vowel *i/e.*” In other words, what Purves describes is a complementary distribution between <e> and <a>. There is no /e/. Considering the general opacity of cuneiform, the theory that the vocalism of Hurrian is richer than \**a*, \**i*, and \**u* might be true. But the problem is that there exists positive evidence that conclusively refutes it. Speiser (1941) examines a considerable body of well-described evidence, which is, in fact, *against* his own hypotheses, and invariably concludes in the opposite direction of the evidence provided. The reader may wonder how such a theory can be kept when it is clearly refuted by positive evidence. An intriguing point in the recent works of some authors is that cuneiform is most often not transcribed according to the standard conventions, but in a kind of rephonemicized Hurrian with no cuneiform primary transcription. The rewriting of the data performed by these authors is unfortunately irreversible: <šu-u-we> becomes *šove*, <šu-ú-ta> becomes *šuda*, <šu-ú-ú-ra> becomes *šura* (!) in Wegner (2007:47). Once rephonemicized, the data are in fact *distorted*. Wegner (2007) does not contain a single paragraph dedicated to cuneiform and the obviously important issue of *reading* Hurrian. Wegner (2007:30) mentions the existence and the importance<sup>22</sup> of Ugaritic texts but does not present a single item. The major reason why this theory is kept is that its promoters ignore other authors and rewrite the data in their own invented system. In her historiography of Hurrian studies, Wegner (2007:149—152) wrote: “Since the middle of the 1960s, Hurrian has been studied above all by V. Haas, M. Salvini, I. Wegner and G. Wilhelm.”<sup>23</sup> Quite incredibly, Wegner (2007) does not seem to know that Jean Catsanicos published an extensive analysis of the

<sup>22</sup> “die wichtig für den Konsonantenstand sind.”

<sup>23</sup> “Seit der Mitte der siebziger Jahre haben sich vor allem V. Haas, M. Salvini, I. Wegner und G. Wilhelm dem Hurritischen zugewandt.”

Boğazköy bilingual with a glossary in Amurru 1 in 1996, which complements the colossal amount of work needed to produce Laroche (1980).

In spite of being entirely wrong on the vowels of Hurrian, Speiser made an excellent suggestion that has not been developed so far: alternations like  $\langle e\text{-}bi\text{-}ir\text{-}ni \rangle = \langle e\text{-}we\text{-}er\text{-}ni \rangle = \langle e\text{-}bar\text{-}ni \rangle$  “point to an underlying \*eẉni” (Speiser 1941:16) or, according to us, \*/iḅni/ ‘the lord’. Another example is  $\langle^d ku\text{-}mu\text{-}ur\text{-}wə \rangle = \langle^d ku\text{-}mar\text{-}bi \rangle$ , which Speiser (1941:20) interprets as a possible \*/o/ but this may be \*/ku\text{-}mṛ\text{-}bi/. Another item, not in Speiser, is the alternation of *Išhara* written both [i š x r] and [u š x r] in Ugaritic script: if <š> is a lateral, as suggested above, then this alternation may stand for \*/ṭ-xa-ra/. It seems possible that Hurrian had syllabic rhotics and syllabic laterals. Gelb—Purves—MacRae (1943:7) develop a similar view: “Occurrence of the variant Hurrian spellings *Eh-li-te-(eš)-up*, *E-he/hé-el-te-šup*, *Eh-li-te-up*, and *E-hi-il-te-šup* suggests that that name was pronounced Ehli-tešup, not Ehli-tešup as listed.” In the same book (1943:189), Purves speaks of “vowelless consonants” and “syllabic” l, n, and r. Moreover, how can Ann-Atal in Gelb (1944:114) be read otherwise than \*[an-ŋ-?a-dal] with four syllables? This point of view is implicit in Diakonoff (1957:4) and (1961:372) who writes: *hawr-ne* for *hawurni*.

The existence of initial clusters is suggested in Speiser (1941:16) by alternations like  $\langle te\text{-}hib \rangle = \langle it\text{-}hib \rangle = \langle ut\text{-}hib \rangle$  in Nuzi, all standing for a potential \*[txib]. And we have seen before a final cluster in *Kušuh* possibly \*[kuzỵ].

## Hurrian Texts Written in Ugaritic Script

The attestations of Hurrian written in the Ugaritic alphabet of Rās Šamra are crucial to the general understanding of the language, especially from a phonetic point of view. Several documents have been analyzed and published in Laroche (1968). There are eleven documents, three of them are somewhat long, the others are more of fragmentary nature. Two of the longest have been translated and annotated by Laroche, and they are worth a revisited analysis in light of present-day knowledge of Semitic and of the Ugaritic alphabet. The Ugaritic alphabet will be transliterated as follows:

ा [?a] b g ḥ d h w z ḥ ṭ y k š l m ḫ n ḫ (ṭ) s ḡ p ḫ q r ṭ ḡ i [?i] ḫ [?u] š

From the Hurrian point of view, this alphabet had the following phonetic values:

?a b g x d - w ḫz - j k š/ž l m z n - ḫs - p - - r s γ ?i ?u

As noted above, emphatics are only used in Hurrian texts for words of Semitic origin. In Laroche (1968), /ा i ḫu/ are written /a e u/, respectively. The next point is the letters /š/, /d/, and /ṭ/. At the time when Laroche wrote his work, the exact nature of these letters was uncertain. Moreover, Laroche wrote <š> for <ṭ>, and did not distinguish <š> and <đ>, both written as <ž> in his transcription, although he made the observation that his <ž<sub>1</sub>> = <đ> and his <ž<sub>2</sub>> = <š> were fairly consistently used in different Hurrian words.

The two documents analyzed by Laroche display the same disposition: the cuneiform tablet on the left and the transliteration of the alphabet on the right. And next, a vocalization of the letters according to a half-phonetic half-conventional system on the left and the translation into French on the right. An extensive set of annotations follows and provides explanations. We have kept the general disposition. Laroche's transliteration is updated according to the order of the alphabet described above, and the reconstructed phonetics is strictly phonetic and does not include any cuneiformic conventions. In general, words or syntagms are separated by a vertical line (written here as <:>). Laroche has added blanks to separate words, but these blanks do not exist in the original tablet.

RS 24.261 in Laroche (1968:499—504) “Sacrifice to Astarte-Šauška”:

The recto of the tablet is in very good shape. Most of it can be read fairly easily, and the missing letters can securely be inferred. The verso is in bad shape and fragmentary. The tablet describes how a ceremony was held. As in Anatolian or Hittite rites, there were two times: first in the yard before the temple and then inside the temple. The first two lines are in Semitic, then the rest is in Hurrian. One line (#9) is not understood.

1. [dbḥ : ḫtrt] (Semitic) Sacrifice to Astarte
2. [qrāt<sup>24</sup> : bgrn] (Semitic) Invocation (?) in the yard
3. [āṭḥlm : ṫūṭkd<sup>25</sup>] \*[asxuluma<sup>26</sup> sauskada] Sacrifice to Šauška<sup>27</sup>
4. [āgndym : ṫdndy] \*[agandijama<sup>28</sup> sadandija<sup>29</sup>] in the *agandi* and the *sadandi*<sup>30</sup>
5. [inmty : īnhzzy] \*[inumasija<sup>31</sup> inixadzidzija<sup>32</sup>] in the place<sup>33</sup> and wisdom<sup>34</sup> of god(s)
6. [kzgđ<sup>35</sup> : īnhmnd] \*[kudzuyada inxumun<sup>36</sup>da] to Kušuh, to the god *Hmn*<sup>37</sup>,
7. [nntd kltd<sup>38</sup>] \*[ninatada kilitada] to Ninatta, to Kulitta,
8. [nbdgd : wlbbtm] \*[nubadigada, wali<sup>39</sup>bibita<sup>40</sup>dama] to Nubadig and the sacred house,<sup>41</sup>

<sup>24</sup> The meaning of <qrāt> is inferred. This looks like a derivative of Semitic *qr̥a* (cf. Arabic *qaraʔa* ‘to recite, to read; to study’) (Laroche 1968:501).

<sup>25</sup> Note that the directive is used for the dative.

<sup>26</sup> Cf. *ašhuškunni* ‘sacrificator’, *ašhu* ‘high’; *ašhul-* ‘to raise’; *ašhulumma* ‘elevation’ (Laroche 1968:501).

<sup>27</sup> This translates line #1 and establishes an equivalence Astarte = Šauška.

<sup>28</sup> Attested partially as <a-ga->. -ma is an enclitic morpheme ‘and, then’.

<sup>29</sup> <ša-ta-an-ti-ya> in Cuneiform writing. Laroche provides no explicit equivalence for this word.

<sup>30</sup> Laroche interprets these two words as being nouns. It is worth wondering whether they should not be better interpreted as being verbs in the Optative: ‘May she lead and well-feed us into the kingdom and wisdom of gods.’ Moreover, this verbal interpretation solves the problem of having Datives marked with the Allative case-marker -da, a problem that Laroche himself had noticed.

<sup>31</sup> <e-nu-(um)-ma-aš-ši-ya> in Cuneiform writing. This seems to mean the ‘place devoted to the god(s)’.

<sup>32</sup> This word means ‘divine wisdom, god of wisdom’ <e-ni-ha-az-zi-iz-zi-ya>. The Semitic form is <ḥ s s> (cf. Akkadian *hassu* ‘intelligent, wise’, *hasāsu* ‘to heed a deity, to be pious; to be intelligent, understanding; to remember; etc.’).

<sup>33</sup> Laroche writes <enumašši>.

<sup>34</sup> Laroche writes <enihazizi>.

<sup>35</sup> Instead of [k š ġ], which also exists.

<sup>36</sup> Laroche (1968:530) suggests a reading \*[xumun] (?) for this word.

<sup>37</sup> Possibly the thunderstorm god Ḥamani, equivalent to Teššub or, more probably, Ḥamu, the brother of Teššub.

<sup>38</sup> There is no vertical line in the tablet.

9. [á lm t<sup>u</sup> : tk<sup>42</sup> t<sup>i</sup>zrpn<sup>m</sup><sup>43</sup>] \*[asxuluma sau : ska (?) t<sup>i</sup>zrpn<sup>m</sup> (?)] : Sacrifice (...) ----- [the tablet has this separation line] |

10. [wb<sup>bt</sup><sup>44</sup> : á lm] \*[wb<sup>bt</sup> : asxuluma] and in the temple : sacrifice |

11. [íntt lnnntm] \*[inasta salannasta<sup>45</sup>ma] and to the gods šalanna

12. [íntt átn(tt)m] \*[inasta atana(sta)ma] and to the gods fathers,

13. [íld : t<sup>i</sup>bd : (t<sup>u</sup>)tkd] \*[ilida tisubada, (sau)skada] to El, to Teššub, to Šauška,

14. [kmrbnd : kzg(d) iy<sup>d</sup>] \*[kumarbinida kudzuya(da) Ijada] to the Kumarbi, to Kušuh, to E(y)a,

15. [áttbd : inárdnd] \*[ástabida iniARDnida] to Aštabi, to the god ARD,<sup>46</sup>

16. [ínhmnd : nbdgd] \*[iniHMNd<sup>a</sup> Nubadigada] to the god HMN, to Nubadig,

17. [íntd : tmgnd] \*[íanatada<sup>47</sup> simiginida] to Anat, to the Sun,

18. [pššphnd] \*[pižažapxinida] to the Pišašaphi [god of Pižažap]

19. [(h)bd : dqtd] \*[[(xi)batada daqitida] to Hebat, to Daqit<sup>48</sup>,

20. [(h)dn<sup>t</sup> hdlrt<sup>t</sup>] \*[[(xu)dinasta xudilurasta] to the Hudena,<sup>49</sup> to the Hudellurra,<sup>50</sup>

21. [íšhrd álnd] \*[íšxara<sup>51</sup>da alanida] to Išhara, to Allani,

22. [nkld nntdm] \*[nikalada ninatadama] to Nikkal and to Ninatta

23. [kltd ádm<sup>d</sup> kbbd] \*[kulitada adamada kubabada] to Kulitta, Adamma and Kubaba,  
[the verso is seriously damaged]

30. [there seems to be an example of Locative -y]

RS 24.274 in Laroche (1968:504—507) “Offerings to El [ilum]”:

1. [íldm : sktndm : á lm] \*[ilidama SKTnidama : asxulama] And to El and to the SKT<sup>52</sup> : sacrifice, |

2. [átn : hwrn] \*[atani : xawurni] (i.e.) the father, the sky,

3. [tyn : nrl] \*[sijina : nirla] the waters, the good,

4. [kmrb : twl] \*[kumarbi<sup>53</sup> : suwala (??)] the Kumarbi, the year,

<sup>39</sup> This word is also attested as <(u)walli-bi Nubadig>. The exact meaning of <Walli> is unknown but seems to mean ‘sacred’.

<sup>40</sup> Cf. <Nubadig pipita>. Bibita seems to be Semitic (Laroche cites Semitic <bi-bítā> ‘in the temple’; cf. Hebrew <babbayiθ> ‘in the house’).

<sup>41</sup> Laroche writes <wali> and <bibítā> untranslated.

<sup>42</sup> The name of Šauška seems to be cut in two.

<sup>43</sup> A very obscure word/syntagm: Laroche does not endorse a segmentation as <ti + zrp + n+ m>. The segment <zrp> is not attested elsewhere. Our suggestion is to read <h> instead of <z>: This enables to read \*[ti'á(a)hra(i) painima] ‘Sacrifice to Šauška thru a lush incense of tamaris-tree’.

<sup>44</sup> To be compared with [b g r n] ‘in the yard’.

<sup>45</sup> Dative plural. Another possibility is -ašta.

<sup>46</sup> The vocalization is unknown.

<sup>47</sup> With ‘ayin.

<sup>48</sup> A Semitic loanword which means ‘the little (maid)’.

<sup>49</sup> The Hudena (-na is the plural article) are goddesses in charge of birth and fate.

<sup>50</sup> The Hudellurra are associated with the Hude(-na). Hudellurra is also written <Hude+luhurra>, and this does not seem to have any connection with *lillura*, a goddess who is wife of Teššub in the Kizzuwatna.

<sup>51</sup> In general, this word is written [úšhr].

<sup>52</sup> Laroche suggests ‘group, followers’ as translation. The SKT seems to stand for the list of gods that follow.

<sup>53</sup> In relationship with the meaning ‘time, year’ of the next word, one is left to wonder whether *Kumarbi* would mean ‘one-hundred-year-old’ <\*kum-arbi ?

5. [nbdg : t(ln)ndm ḥtn] \*[nubadig : sa(lan)nidama atanida] Nubadig, and to the Salanni, to the father,
6. [in ḥlšyḡ i(n) ḥmrw] \*[ini alažijayi ini amuriwi] God of Alašiya, God of Amurru,
7. [in ḥgrtw : ḥmṭmrw] \*[ini ugaritawi ḥamistamrawi] God of Ugarit, of Ammistamra,
8. [t(t)bd] \*[ti(s)ubada] to Teššub,
9. [kšgd] \*[kudzuyada] to Kušuh,
10. [ḥṭbd] \*[astabida] to Aštabi,
11. [iym hzzdm] \*[ijadama xadzidzidama] and to Ea and the wisdom (Hasis),  
[verso]
12. [kydd : (...)d] \*[kijazi (...)da] to the kiyaše<sup>54</sup> to (...)
13. [nwrwnd] \*[nawarwi(??)nida] to Nawarwi (??)<sup>55</sup>
14. [ḥgrḥnd] \*[ayrusxinida] to the incense-burner
15. [ḥbrḥnd] \*[xubrusxinida] to the (melting) pot
16. [kldnd] \*[kildinida] to good health

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17. [uḍnd] \*[uzunida] to the *ušunni*<sup>56</sup>
18. [tgnd] \*[taginida] to the *tagi*

Morphemes attested in Ugaritic writing:

- a) Definite article: Sg. [n]; Plural [nn]
- b) Singular Ergative: [t] standing for \*/s/
- c) Singular Genitive: [w]
- d) Singular Allative: [d]; Plural [tt]
- e) Singular Comitative: [r]; Plural [šr] \*/-žura/
- f) Directive: [y]
- g) Plural Absolutive: [š] \*/ž/; oblique cases are written [t] \*/s/
- h) Ethnonymic suffix: [g] <-ḥi->: [H 1 b g] *Halbahi* ‘of Halba’
- i) Adjective: [h] <-ḥhi->: [x y r x] *hiyaruhhi* ‘golden, made with gold’

## The Mitanni Letter

This document is important in the historical rediscovery of Hurrian, as it showed that one more language must have existed alongside Akkadian in the second millennium BCE. As stated before, this situation has been known since 1887. In spite of its generous length, this letter has regrettably not been very useful in the decipherment of Hurrian in general. Many points in the understanding of this document are still awaiting a real elucidation. As is often the case, bilingual or multilingual texts and tablets have done more in deciphering a new language than a long and ill-understood document.

<sup>54</sup> This word is an object according to Laroche.

<sup>55</sup> This may mean ‘the god of pastures’.

<sup>56</sup> This may refer to a ‘sacrificed animal’ (cf. *uži* ‘flesh’).

Some parts of the letter are seriously damaged or destroyed. An extensive transcription was performed by Friedrich in 1932. A few lines of this letter will provide connoisseurs of Cuneiform writing with a glimpse of Cuneiform Hurrian.

Mit. I 83

Gi- li- i- aš-ša-a-an

pa-aš-ši-i-it-hi-wu-uš

ti- wə an-ti gu-lu-u-u-u-ša

Mit. I 84

ma-a-an-na-a-an hi-il- li

še-e- na-wə-ša-an

<sup>1</sup> Ni- im- mu-u- ri- i- aš

Mit. I 85

KUR Mi-zí- ir- ri- e- wə-ni-eš

ib- ri- iš

ta-še ab- li

ta- a- a- nu-u- ša

Mit. I 86

URU I.hi-pè-ni

URU Ši-mi-i- gi- ni- e- wə-ni- e-ma-a-an

ú- nu- u- u- ša

Mit. I 87

<sup>d</sup> ši- mi- i- gi- ni- e- wä- ma-a-an

e- e- ni- i- wë at- ta- i- i-wə a-ku-u-ša

Mit. I 88

at- ta- a- ar- ti- i- wë- na-a- ma-a-an

šu- ú- al- la- ma-an

ta- še- e- e- na-<sup>MEŠ</sup>

Mit. I 89

tiš-ša-an

tiš-ša-an gi- lu- u- šu- a

za- ar-

ma-a-an

še- e-

na- a- ap-

pe

Mit. I 90

KUR u-u-mi-i-ni

ši- u-u- ši

a- ti- i- ni- e- in

ta- še- e- en

id- du-u-u-š- ta

Mit. I 91

še-e- ni-pa-an

e- ti- i- e- e- im- ma-ma-an

ta- še- e- ni- e- wë

wü-ri- i- ta

Mit. I 92

ši- ia

ir- ka- a- mu-u-ša-ma-a-an

tiš-ša-an

<sup>1</sup> Gi- li- i- aš

ta- še- e- ni- e- wë

Mit. I 93

id- du- um -mi ma-a- na-an hi- il- li nu-pè- e ni- na- an ha- a- ar- ri- en

Mit. I 94

na- a- zu- u- ša a-ti- i- ni- in <sup>d</sup> Ši- mi- i- gi- ni- e-wə- ni- e- im- ma- ma- an

Mit. I 95

am-mu-u-u-ša ša- bu- ú- ha-a- at- ta- a- an tiš-ša-an [a- ti-] i- ni- i- in

Mit. I 96

ta- a- an ki-[i] -in ka- du-u- ša [i]- i- al- la- a- ni- i- in

Mit. I 97

še-e-ni- ib-[wu]- ú- e-n i- e- wə KUR u-u-[mi]-i-ni-i-we e- ru- uš- ki- i- in- na

Mit. I 98

e- ti- i- i-[...]- ta- a-na-aš-še-na i- i- al- li- e- ni- i- in

Mit. I 99

še-e-ni- ib- wu-[uš] ta- še- e- ni- e- wə e- ti- [i]- ta ti- we- e- na<sup>MES</sup>

Mit. I 100

e- ru- u- uš-[ki-in-na] ta- a- nu-u-ša- a- aš-še-na an- ti- La- a- a- an

Mit. I 101

<sup>d</sup> ši- mi- i- gi- [...] <sup>d</sup> a-ma-a-nu- ú- La-an <sup>d</sup> E- a- a-šar- ri- ni- e- el- La-a-an

Mit. I 102

še-e-ni- ib- wü- [ú-] a KUR uu-mi-i-ni- [wa-] al- La-a-an e- ti- i- ta hu-tan-na

Mit. I 103

pè-en- ti- en ni(?)-ša-a- al- La-a-an še-ħar- na- a- al- La- a- an

Mit. I 104

i- i- al -La- a- ni- i- in še-e-ni-ib-wu-uš ta-še-e- ni- e- we e- ti- i- ta

Mit. I 105

ti- we- e- na <sup>MEŠ</sup>	ta- a- nu-u-ša-a-aš-še-na	<sup>d</sup> ši- mi- <u>i</u> - gi-ni- <u>e</u> - wä
Mit. I 106		e- ni- <u>i</u> - wä
at- ta- i- i- wa	e- ti- i- ta	an-til- <i>La</i> -a-an
		<sup>d</sup> ši- mi- <u>i</u> - gi- níš
Mit. I 107		a- ri- e- ta
še-e- ni- ib- wü- ú- a	še-e-ni- ib-wü- ú- ul-	<i>La</i> -a-an
Mit. I 108		ti- ša- a- an- na
ú - ú- ri- a-a- aš-še-na	ti- we- e- na <sup>MEŠ</sup>	šu- ú- al- La- ma- an- na <sup>MEŠ</sup>

There exists a theory that this document displays a writing tradition in strong discrepancy with the standard cuneiform conventions. This ad-hoc hypothesis is, in our opinion, a very strong and unacceptable case of “special pleading”. Nothing supports this hypothesis that Hurrian created a “special” cuneiform convention to write the letter of Tušratta to Amenophis III. The E24 Mitanni letter seems to be written in perfectly standard cuneiform conventions. Moreover, such a hypothesis conflicts with the tendency of Akkadian to prevail over Hurrian even in the Hurrian-speaking areas. It is just unthinkable that Hurrian people or scribes would revolutionize the Akkadian-based conventions. Moreover, according to Wilhelm (1996:180), the letters of Tušratta are written in nearly the same ductus as most literary texts written in Akkadian that have been found in the libraries of Boğazköy.<sup>57</sup> It is hard to figure out how the theory that the Mitanni letter should be written in a “different” writing system can handle all these obvious signs of a complete formal and structural continuity.

According to that theory, <ku> and <gu> would stand for \*[k/go] and \*[k/gu].<sup>58</sup> The instances of <ku> and <gu> in the Mitanni letter are:

a) Initial position:

- no <ku>,
- <gu> in I 45 <gu-ru-u-[ša]>, I 83 <gu-lu-u-ša>, II 56 <gu-lu-ša-ú>, II 105 <gu-li-a-a-[ma-a-an]>, II 106 <gu-li-a-a-ma>, III 15 <gu-ru>,

b) Non-initial position:

<sup>57</sup> «Une grande partie des textes akkadiens littéraires retrouvés dans les bibliothèques de Boğazköy sont écrits avec un ductus pratiquement identique à celui des lettres de Tušratta.»

<sup>58</sup> Cf. Wilhelm 2004a and Bush 1961:22.

- <ku> in I 87 <a-ku-u-ša>, I 115 <[na]-ak-ku-ša-a-ú>, II 21 <tup-pa-ku-u-uš-hé-na<sup>MES</sup>>, II 24 <[...]-na-a-ku-lu-uš-te-la-an>, II 61 <a-ku-u-ša-a-an-ni>, II 68 <šu-uk-ku-u-ut-ti>, III 9 <wə-ri-ik-ku-u-un-ni>,
- <gu> in I 81 <ak-gu-uš>, I 81 <a-gu-ú-a>, II 58 <a-gu-ka-ra-aš-ti-en>, II 70 <šuk-gu-ú-ud-du-u-u-ḥa>, II 86 <a-gu-ú-ka-ra-aš-ti-en>, II 104 <ul-lu-ḥu-uk-gu-ú-un>, III 103 <na-wu-uk-gu-ú-un>,

Is this corpus a reason to think <ku> and <gu> are anything but graphic variants? The reasons not to believe are: (1) <ku> never appears initially; (2) some items seem to be variants of the same words: Mit. II 68 <šu-uk-ku-u-ut-ti> = Mit. II 70 <šuk-gu-ú-ud-du-u-u-ḥa>; Mit. I 87 <a-ku-u-ša> = Mit. I 81 <a-gu-ú-a>. There is no basis for a contrast between \*/Ku/ and \*\*/Ko/. The signs <ku> and <gu> are variants.

Another claim of that theory is that <ki> and <gi> should contrast. <ki> and <gi> would stand for \*[k/gi] and \*[k/ge].<sup>59</sup> The instances of <ki> and <gi> in the Mitanni letter are:

a) Initial position:

- <ki> in I 96 <ki-i-in>, II 87 <ki-im-ra-a-at-ta-a-an>, II 103 <ki-i-pu-[...]-a-la-a-en>, II 114 <ki-i-pa-aš-ši-ib-wə>,
- <gi> in II 7 <<sup>l</sup>Gi-li-i-an>, II 16 <gi-pa-a-nu-u-ša-a-aš-še>, II 20 <gi-pa-a-nu-u-ša-a-aš-še-na>, II 22 <gi-pa-a-nu-u-ša-a-aš-še-na>, I 53 <gi-ib-še-ma-a-an>, II 54 <gi-pa-a-ni-e-ta>, II 63 <gi-pa-a-ni-e-ta-a-am-ma-ma-an>, III 18 <gi-pa-a-nu-ša-a-uš-še-na>,

b) Non-initial position:

- <ki>, always geminate, in I 97 <e-ru-uš-ki-i-in-na>, II 16 <a-ki-[...]>, II 52 <na-ak-ki-du-u-we-en>, II 103 <šur-wu-uš-ti-ik-ki-i-in>, III 3 <ta-duḥ-ḥu-li-ik-ki-in-na-a-an>,
- <gi>, never geminate, in I 101 <<sup>d</sup>Ši-mi-i-gi-[...]>, I 105 <<sup>d</sup>Ši-mi-i-gi-ni-e-wə>, I 106 <<sup>d</sup>Ši-mi-i-gi-níš>,

What are the indications that <ki> and <gi> may contrast? What is the difference between <gi-pa-a-n(...)> and <ki-i-pa-n(...)>, which appears several times in the letter? And word-internally, we can see that <gi> is never geminate and <ki> is always geminate. There is no basis for a contrast between \*/Ki/ and \*\*/Ke/.

The theory about the Mitanni letter having a “special” cuneiform convention is a fiction. The distributional features of the cuneiform signs conflict with this approach.

<sup>59</sup> Cf. Wilhelm 2004a and Bush 1964:22.

A more tricky issue is the difference between  $\langle te \rangle$  and  $\langle ti \rangle$ . There is no instance of variant writings in the letter, so it would seem that they contrast. They combine with vowel signs as shown in the table:

	-u-	-i-	-e-	-a-	-ú-
ti	X	exists	exists	exists	X
te	exists	X	exists	X	X

What appears is a near complete complementary distribution. But  $\langle te-e \rangle$  and  $\langle ti-e \rangle$  contrast with each other. Teššub is written  $\langle te-e-š-šu-ub \rangle$ , and the Ugaritic alphabet shows that there is no consonant between  $\langle t \rangle$  and  $\langle š \rangle$ . Our analysis is that the difference between  $\langle te-e \rangle$  and  $\langle ti-e \rangle$  is not vocalic but is a device to write the glottal stop:  $\langle te-e \rangle$  is  $*[ti:-]$  but  $\langle ti-e \rangle$  is  $*[ti-?i:-]$ . The complex forms  $\langle e-ti-i-e-e-(...) \rangle$  and  $\langle e-ti-i-i-(...) \rangle$  can be interpreted as standing for  $*[i-ti-?i:-]$  and  $*[i-ti-?i:-]$  respectively. Word-initially,  $\langle e-(e) \rangle$  and  $\langle i-(i) \rangle$  also contrast and this can be interpreted as standing for  $*[i(:)-]$  and  $*[?i(:)-]$  respectively. The existence of a glottal stop is quite sure: what do Mit. I 83  $\langle gu-lu-u-u-ša \rangle$ , Mit. I 110  $\langle a-nu-ú-a-ma-a-an \rangle$ , Mit. II 124  $\langle hu-ra-a-a-ti \rangle$ , Mit. I 85  $\langle ta-a-a-nu-u-ša \rangle$  stand for, if there is not a glottal stop to enable a syllabication?

Another issue is the interpretation of  $\langle -u- \rangle$  and  $\langle -ú- \rangle$ , both of which seem to stand for the vowel  $*/u/$ . There is a consistent pattern showing that  $\langle u \rangle$  is  $*[?u]$  but  $\langle ú \rangle$  is  $[u]$ . Both are written word-initially as  $\langle ՚ \rangle$  in Ugaritic script:  $\langle u-u-mi-i-ni \rangle$  ‘country’ is  $[՚ m n]$  and  $\langle ú-ú-na \rangle$  ‘to come’ is  $[՚ n]$ . But the Egyptian pharaoh *Neb-Maāt-Rā* is spelled  $\langle Ni-im-mu-u-ri-i-a \rangle$   $*[nimmu?uri:?a]$  whereas the God *Amon* is spelled  $\langle A-ma-a-nu-ú \rangle$   $*[?ama:nu:]$ . There is (at least) one glottal stop in *Maāt* and none in *Amon*.  $\langle ti \rangle$  and  $\langle te \rangle$  can be followed by  $\langle -u- \rangle$  but not  $\langle -ú- \rangle$ , because the glottal stop of  $\langle u \rangle$   $*[?u]$  prevents the assimilation  $*[i-u] > *[i:w] > *[i:]$ . There are instances of  $\langle -ú-ú- \rangle$ : Mit. II 90  $\langle a-ú-ú-rat-ta-ma-an \rangle$ , Mit. II 93  $\langle šu-ú-ú-ra \rangle$ , Mit. II 114  $\langle hi-ši-im-du-a-ú-ú-un \rangle$ , Mit. III 2  $\langle a-ru-u-ša-ú-ú-un \rangle$ . This graphic device distinguishes  $\langle -a-ú- \rangle$   $*[aw]$  from  $\langle -a-ú-ú- \rangle$   $*[a?u:]$ . Mit. II 93  $\langle šu-ú-ú-ra \rangle$  is  $*[šu-?u:-ra]$ . These conclusions are valid *only* for the Mitanni letter, because, in Nuzi, the contrary seems to be true: there,  $\langle -ú- \rangle$  stands for  $*[?u]$ , as suggested by Berkooz and erroneously dismissed in Speiser (1941:22). This shows that the different scribal traditions for cuneiform should not be equated from one site to another. As noted by Speiser (1941:22), “The syllabaries which differentiate between voiced and voiceless stops also employ  $\langle ú \rangle$  to the exclusion of  $\langle u \rangle$ .”

The graphic devices, valid for the Mitanni letter, can be summarized in this table:

Word-initial	#e- * [i-]	#i- * [?i-]	#ú- * [u-]	#u- * [?u-]
Double initial	#e-e- * [i:-]	#i-i- * [?i:-]	#ú-ú- * [u:-]	#u-u- * [?u:-]
Word-internally	Ci-e- * [i?i-]	Ci-i-i- * [-i:?i-]	-a-ú- * [aw]	Cu-ú * [-u:-]
Word-internally	Ci-e-e- * [i?i:-]	Ci-i-e-e- * [-i:?i:-]	Cv-ú-ú * [v-?u:-]	Cv-u * [v-?u-]

This confirms that the vocalic system of Hurrian includes only  $*/a/$ ,  $*/i/$  and  $*/u/$ . And this also raises the issue of phonemic length in Hurrian. The word ‘earth’ must be  $*/u:mi:ni/$  and cannot be  $*/u:mi?ini/$  as shown by Ugaritic  $[՚ m n]$ , and only one of the long vowels can be accented. This suggests that vocalic length was marginally phonemic in Hurrian: there exist a

few rare cases of long vowels that are most probably not accented but length coincided with accent most of the time.

### Proto-Indo-European Phonology

Several reconstructions have been proposed for the Proto-Indo-European phonological system. The most complex system is that of the Neogrammarians (cf. Brugmann 1904:52). Among more recent reconstructions, that of Szemerényi (1996:69—70) is closest to that of the Neogrammarians, while the simplest system is that proposed by Lehmann (1952:99), which is as follows:

1. Obstruents:	p	t	k	$k^w$
	b	d	g	$g^w$
	$b^h$	$d^h$	$g^h$	$g^{wh}$
			s	
2. Resonants:	m	n		
	w	r	l	y
3. Vowels:	e	a	o	
	i·	e·	a·	o·
				u·
4. Laryngeals:	x	γ	h	?

Other recent reconstructions include those of Beekes (1995:124—125) and the system of Gamkrelidze—Ivanov (1995.I:116), in which the plain voiced stops of traditional Proto-Indo-European are reinterpreted as glottalized stops (ejectives). Lehmann (2002:196—202) discusses and evaluates each of these reconstructions and then proposes a slightly updated version of his earlier views.

The system of stops reconstructed for Proto-Indo-European by Fortson (2004:51), Sihler (1995:135), and Clackson (2007:34) is followed here:

	Labial	Dental	Palatal	Velar	Labiovelar
Voiceless	p	t	ḱ	k	$k^w$
Voiced	(b)	d	ǵ	g	$g^w$
Voiced aspirated	bh	dh	ǵh	gh	$g^{wh}$

According to Lehmann, a series of resonants is also to be reconstructed for Proto-Indo-European: \*m, \*n, \*w, \*l, \*r, \*y. The resonants could function as syllabics or non-syllabics depending upon their environment. They were non-syllabic (1) when between vowels or initially before vowels, (2) when preceded by a vowel and followed by a consonant, and (3) when preceded by a consonant and followed by a vowel. The resonants became syllabic in early

Proto-Indo-European when the stress-conditioned loss of former contiguous vowels left them between two non-syllabics, thus: \*CVRCV > \*CəRCV > \*CRCV.

The laryngeals will be written here as: \*H<sub>1</sub>, \*H<sub>2</sub>, \*H<sub>3</sub>, \*H<sub>4</sub> (= Lehmann's \*/?/, \*/χ/, \*/γ/, and \*/h/, respectively). Both Fortson and Clackson write \*h<sub>1</sub>, \*h<sub>2</sub>, \*h<sub>3</sub>.

Clackson (2007:34) reconstructs the following vowels: short: \*e, \*o, \*(a); long: \*ē, \*ō, \*(ā).<sup>60</sup> He notes (2007:36):

We shall see later in this chapter (section 2.5) that the loss of laryngeals in most of the PIE languages also had concomitant effects on the vowel system, and there is still debate about whether the reconstructed system really needs the vowels \*a and \*ā, which accordingly have been bracketed in the phoneme inventory given in table 2.4. Over the last fifty years the scholarly consensus has swayed between accepting these vowels in the parent language and rejecting them. Some Indo-Europeanists have gone even further and reconstructed an original vowel system with only one vowel, \*e. At present, the balance of opinion has settled in favour of reconstructing \*a and \*ā, principally supported by correspondence sets such as the word for 'nose', which in different IE languages derives from a stem \*nas- or \*nās-.

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<sup>60</sup> For different (and conflicting) interpretations concerning the reconstruction of the Proto-Indo-European vowels, especially on the phonemic status of \*i and \*u and diphthongs, cf. Beekes 1995:137—142, Brugmann 1904:66—109, Fortson 2004:60—62, Lehmann 1952:7—21, Meillet 1964:98—126, Szemerényi 1996:37—45.



# 3

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## Overview, Derivational Morphology, and Syntax

### Overview of Morphology

Structurally, Hurrian is an agglutinating language. It is exclusively suffixing. There are no examples of prefixes or infixes. All affixes are suffixes, of which there are a large number. Though word order tends to be verb-final (SOV), there is a good deal of flexibility here.<sup>61</sup> As noted by Bush (1964:96), who follows Speiser (1941), there are three fundamental stem types in Hurrian: (1) verbal stems; (2) nominal (and adjectival) stems; and (3) particles. Some stems are typically nouns, like *attai* ‘father’, while others are typically verbs, like *pa-* ‘to build’, but it should be borne in mind that there is a considerable permeability between the classes of words, and some endings can be suffixed to different classes of words: for example, the Instrumental case-marker can be added to a noun: *išuhni* ‘silver’ > *išuhnae* ‘with silver’, to an adjective conjugated in the past tense (!): *niri* ‘good’ > *nir-u-š-ae* ‘swiftly’; to a verb: *sidi-* ‘to curse’ > *sidi-l-ae* ‘(while) cursing repeatedly’; to a number: *šin* ‘two’ > *šin-ae* ‘on the second day’. The two syntagms ‘with love’ and ‘lovingly’ can get only one translation into Hurrian: *tad-ae*. On the whole, most stems are verbs, and there are two frequent nominalizing suffixes: *-i* for non-finite verbal forms and *-š* for finite verbal forms. On the contrary, it seems that there is no suffix to create a verb. Any stem that ends with a consonant is implicitly a verb. A root with a string of suffixes becomes a noun, only when it is made to be so either with *-ni*, or *-nna* ‘Definite article (sg./pl.)’ or with *-i*, which could be described as being the ‘Indefinite article’. Maybe it would be even more accurate to say that it does not “become” a noun: the undifferentiated stem is just made to function syntactically like a noun. This fluidity was noted by Speiser (1941:199): “The parts of speech are thus often interchangeable and dependent for their function on their actual position in the sentence.”

Hurrian makes only a very limited use of compounds. One productive type is the “n-year-old” type: *šin-arbu* ‘two-year-old’; *tumn-arbu* ‘four-year-old’. Another point is the extremely limited resort to reduplication. Very few verbs display this feature: *kil-* ‘(intr.) to rise, (tr.) to raise’ > *kiligid(išt)-* ‘id’.

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<sup>61</sup> So Gragg (2003:255): “Word order tends to be verbal final, but all permutations occur. The language has postpositions, and the extensive nominal and verbal morphology is exclusively suffixing.”

## Derivational Morphology

In Hurrian, derivational suffixes can be used to form either nouns or adjectives. They are added after the stem vowel. They include the following:

1. *-ant-* used to create adjectives: *abi* ‘face, front’ > *awant-* ‘anterior’; *pisu-* ‘to rejoice’ > *pisant-* ‘happy’. Compare the Proto-Indo-European adjective ending *\*-ent-/\*-ont-/\*-nt-*. It is preserved in a small number of adjectives, as illustrated by the following Sanskrit examples (taken from Burrow 1973:144): *brhánt-* ‘great’, *mahánt-* ‘great’, *rhánt-* ‘small’, *pŕṣant-* ‘speckled’, and *rúsant-* ‘bright’. This ending was also used to create participles. In Hittite, there is only one participle form: *-ant-* (cf. Hoffner—Melchert 2008:134—135 and 339—340; Kloekhorst 2008:183—184). It is neither active nor passive, but, rather, it is used to form participles on stative verbs (cf. Lehmann 2002:183): *adant-* ‘eaten, having eaten’, *kunant-* ‘killed’, *akkant-* ‘having died, dead’. In the other daughter languages, this ending is used to form present participles: Sanskrit *adánt-* ‘eating’, *bhárant-* ‘bearing’, *bhávant-* ‘being’; Greek *ἔδοντ-* ‘eating’, *φέποντ-* ‘bearing’; Latin *edent-* ‘eating’, *ferent-* ‘bearing’, *amant-* ‘loving’; Gothic *bairand-* ‘bearing, carrying’; etc. As noted by Burrow (1973:144), the specialization of this suffix in participial use, though ancient, is a secondary development.
2. *-ardi-*: used to create collectives: *śalardi-* ‘group of daughters’ (cf. *śal-* ‘daughter’); *attardi-* ‘forefathers’ (cf. *attai-* ‘father’); *ardardi-* ‘citizens, townspeople’ (cf. *arde-* ‘town’); *älardi-* ‘female relatives’ (cf. *äli-* ‘sister’). There may be a parallel here with Indo-European. In Old Irish, *-red*, *-rad* is a common collective suffix, and comparable forms are found in other Celtic languages (cf. Welsh *-red*). This suffix is usually taken to be a derivative of the Proto-Indo-European root *\*ret-/rot-* ‘to turn, to revolve, to roll’, which is found in: Latin *rota* ‘wheel’; Old Irish *roth* ‘wheel’, *rethid* ‘to run’, *riuth* ‘running’; Welsh *rhod* ‘wheel’, *rhwad* (< *\*rōt-*) ‘troop’; Sanskrit *rátha-* ‘chariot’; Lithuanian *rātas* ‘wheel’ (cf. Pokorny 1959:866). Perhaps the same process was at work in Hurrian as in Celtic, and we have what was originally an independent word meaning something like ‘group, collection’ (cf. Welsh *rhwad* ‘troop’ for the semantics), which has survived only as a suffix.
3. *-Hn-* attested in *umini* \*[úmi:ni] ‘land’.
4. *-hhi-/hhe-* and *-hi-*: used to create adjectives denoting “relating to” or “pertaining to” the noun from which they are derived; also used in ethnonyms: *Halbahi-* ‘pertaining to the town Alep’ (cf. *Halba* ‘the town Alep’), *turuḥhi-* ‘male’, *aštuhhi-* ‘womanly, feminine’ (cf. *ašte* ‘woman’). The suffix is preceded by *-u* in general, sometimes *-a* in place names, or nothing except as in <<sup>URU</sup>Du-ug-ri-iš-hi e-bi-ir-ni> KUB XXXVII 38 IV 14 ‘The Tukhrishite lord’. The general case is: *hatti* > *hattuhi*. In Proto-Indo-European, there was a derivational suffix *\*-VH<sub>2</sub>-* (*\*-eH<sub>2</sub>-* > *\*-ā-*; *\*-iH<sub>2</sub>-* > *\*-ī-*; *\*-uH<sub>2</sub>-* > *\*-ū-*). One of its functions was to create adjectives denoting “relating to” or “connected with” the noun or verb from which they were derived (cf. Brugmann 1888—1895.II/I:112 and 1904:341—347). This usage can be found in Hittite in forms such as: *annanuhha-* ‘trained (of animals)’, from *annanu-* ‘to train, to educate’. *\*-VH<sub>2</sub>-* was also used to create abstract nouns. In later Proto-Indo-European, these formations became associated with the feminine gender, and it is no longer possible, except in rare cases, to distinguish the earlier usage; for example, Burrow (1973:195) notes that “[t]he adjective *mahá* ‘great’ remains in Sanskrit the only non-feminine adjectival *ā*-stem,

and it is defective.” At an earlier stage of development, however, the feminine gender did not exist (cf. Burrow 1973:201—203; Lehmann 2002:65—67).

5. *-isk-* attested in *summi* ‘hand’ > *šummiški* ‘apprentice’, and *tadi-* ‘to love’ > *tadaraskae* (Intr.) ‘as the one who starts to love again and again’ (?). In Indo-European, there is a fairly common verbal suffix *\*-ske/o-*. Its meaning varies somewhat from language to language (cf. Fortson 2004:90; Szemerényi 1996:273—274). In Hittite, it can have durative, iterative, progressive, distributive, and inchoative meanings (cf. Hoffner—Melchert 2008:318—322; Kloekhorst 2008:767—770). In Sanskrit, it forms a special present stem, with no apparent semantic change, and the same generally applies to Greek, though some Homeric, Herodotean, and Ionic forms seem to have a meaning similar to what is found in Hittite. In Latin, this suffix has taken on inchoative meaning. In Tocharian, it has causative meaning. Hittite appears to have preserved the original meaning. Examples include: Greek (reduplicated) *γιγνώσκω* ‘to perceive, to know’; Latin *nōscō* ‘to become acquainted with, to know’. Vedic *pr̥ccháti* ‘to ask’; Latin *poscō* ‘to ask, to request’; Old High German *forscōn* ‘to inquire, to search (for), to look into, to investigate’ (New High German *forschen*); Old Irish *arco* ‘to ask’. Vedic *rccháti* ‘to go (to), to reach, to obtain’; Hittite *ar-aš-ki-iz-zi* ‘to come (to), to arrive (at)’. There is also a nominal suffix *\*-isk-*, which serves to create diminutives in Greek and Tocharian (cf. Greek *παιδίσκος* ‘little boy’, *παιδίσκη* ‘little girl’; Tocharian B *māñcuške* ‘prince’), while, in Germanic, it serves to create adjectives from nouns (cf. Gothic *barnisks* ‘childish’, *mannisks* ‘human’; Old English *mennisc* ‘human’). *\*-sk-* is also found as a primary nominal suffix: cf. Sanskrit *pr̥cchā* ‘question, inquiry’.
6. *-k(k)a-* diminutive: *aštaga* ‘(young) woman, maiden’ (cf. *ašte* ‘woman’), *tahakka/tahaga* ‘(young) man’ (cf. *tahe* ‘man’), *Hanakka* personal name (cf. *han-* ‘child’). In Indo-European, there is a diminutive suffix *\*-ko-*, as illustrated by the following Sanskrit examples: *marya-ká-* ‘young man’ (cf. Greek *μετρός* ‘young girl, lass’, *μετράκιον* ‘young boy, lad’), *kumāra-ká-* ‘little boy’, *putra-ká-* ‘little son’. *\*-ko-* could also be used as a general suffix to form nouns and adjectives, in which case it does not appear to have affected the meaning in any way.
7. *-m(m)e/i* meaning unknown: *purame* ‘servant’, *āl(a)mi* ‘oath’, *halmi* ‘song’. In Indo-European, the suffix *\*-mo-* is exceptionally productive. It is used to form both nouns and adjectives, and a whole host of derivative suffixes are built on it. A few examples from Sanskrit will suffice: *gharmá-* ‘heat, warmth, sunshine’ (cf. Greek *θερμός* ‘hot, warm’; Latin *formus* ‘hot, warm’), *dhárma-* ‘law’, *ájma-* ‘career, march’ (cf. Greek *ὅγμος* ‘a straight line, a furrow’).
8. *-ni* used to create (concrete) deverbal derivatives: *sidar-* ‘to curse’ > *sidarni* ‘curse’; *muši-* ‘to put, to pile up, to tidy up’ > *mušuni* ‘woodlog piler’; *naw-* ‘to graze’ > *nawni* ‘pasture’; *barini* ‘baker’, *barantarini* ‘cook’ and *wutarini* ‘dishwasher’. Compare the Proto-Indo-European suffix *\*-ni-*, used to create nouns and adjectives, as in the following Sanskrit examples: *śróni-* ‘hip’, *ghýni-* ‘heat’, *yóni-* ‘womb’, *pŕšni-* ‘speckled’, *prení-* ‘loving’, *váhni-* ‘carrying’, etc.
9. *-ni-*, *-nni-*: used to create adjectives and nouns: *haši-kku-ni* ‘deaf person’ (cf. *haš-* ‘to hear’), *atta-ni* ‘father’ (cf. *attai* ‘father’), *katinna* ‘speaker’ (cf. *kad-* ‘to speak’). In Indo-European, the suffixes *\*-no-*, *\*-ni-* *\*-nu-* are exceptionally productive. These suffixes are used to form both nouns and adjectives, and there are a whole host of derivative suffixes as well. Again, a

few examples from Sanskrit will suffice: (1) *\*-no-*: *stena-* ‘thief’, *yajñá-* ‘sacrifice’ (cf. Greek ἅγνος ‘holy, pure’), *ghṛṇá-* ‘heat’, *nagná-* ‘naked’, *pūrṇá-* ‘full’ (cf. Latin *plēnus* ‘full’; Lithuanian *pilnas* ‘full’), *kṛṣṇá-* ‘black’ (cf. Old Prussian *kirsna-* ‘black’); (2) *\*-ni-*: *ghṛṇi-* ‘heat’, *agni-* ‘fire’ (cf. Latin *ignis* ‘fire’; Lithuanian *ugnis* ‘fire’); (3) *\*-nu-*: *sūnú-* ‘son’ (cf. Gothic *sunus* ‘son’; Lithuanian *sūnūs* ‘son’), *grdhnú-* ‘greedy’.

10. *-š-*, *-išt-* intensive: *pisu-* ‘to rejoice’ > *pisantišt-* ‘to be extremely happy’; *talmi* ‘great’ > *talawuši* ‘grand, sovereign’, *talmašti-* ‘to celebrate, to magnify’; *til-* ‘to kill, to destroy’ > *tilušti-* ‘to completely destroy’; *sammi-* ‘to rip, to tear’ > *sammalašti-* ‘to completely tear apart’; *šašuli-* ‘to provide with food’ > *šašlušti-* ‘to satiate’; *haš-* ‘to hear’ > *hašaš(t)-* ‘to listen carefully’; *hub-* ‘to break’ > *hubušt-* ‘to smash’. Compare the Proto-Indo-European suffix *\*-istos*, which was the usual superlative ending when the comparative was formed in *\*-yes-* in the latest period of development. Examples include: Sanskrit *svád-ištha-* ‘sweetest’; Greek ἱδ-ιστο-ς ‘sweetest’; Gothic *siūt-ist-s* ‘gentlest’; Old English *swēt-est-* ‘sweetest’.
11. *-š(š)e-/-š(š)i-*: used to create abstract nouns: *šarrašši-* ‘kingship, royalty’ (cf. *šarri-* ‘king’ [of Semitic origin]). Note *ewri-šši-hi* ‘royal’ with two suffixes. In Proto-Indo-European, *\*-s* was an extremely common suffix and had various usages. For example, there is a large class of primary nominal stems in *\*-e/os-* — examples include: *\*nebhos-* ‘cloud, sky’ (cf. Sanskrit *náhvas-*; Old Church Slavic *nebo*; Hittite *nepiš-*); *\*ménos-* ‘mind’ (cf. Sanskrit *mánas-*; Greek μένος); *\*genos-* ‘race, kind’ (cf. Sanskrit *jánas-*; Greek γένος; Latin *genus*); etc. (for discussion and more examples, cf. Burrow 1973:158—164). Such formations could be turned into adjectival stems by shifting the accent from the root to the ending, as in the following Sanskrit examples: *ápas-* ‘work’ ~ *apás-* ‘active’; *táras-* ‘energy, force’ ~ *tarás-* ‘forceful’; *yáśas-* ‘beauty, glory’ ~ *yaśás-* ‘beautiful’ (cf. Burrow 1973:160). Urartian also has examples of this formation: *gunuše* ‘battle, slaughter’ (cf. Greek φόνος ‘murder, homicide, slaughter’; Sanskrit *ghaná-h* ‘slaying, killing; club’ < Proto-Indo-European *\*gʷʰónos*).
12. *-tan*, *-ten* in professional designations: *eni* ‘god’ > *endan* ‘priest’ (literally, ‘god-worker’).
13. *-ti* used to create abstract derivatives, apparently from intransitive verbs: *kālu-* ‘to be in good shape, mood’ > *kāl-di* ‘health’; *hinzu-* ‘to be constrained, hard-pressed’ > *hinziti* ‘need, want’. *-ti* is also used for quantities: *tumna* ‘four’ > *tumnati* ‘a group of four’. In Indo-European, the suffix *\*-ti-* was used to create neuter action nouns, as in the following Sanskrit examples: *gáti-* ‘going’ (cf. Greek βάσις ‘stepping, step’ [< *\*gʷʰmti-s*]), *sákti-* ‘power’, *dhṛ̥ti-* ‘firmness’, *júṣti-* ‘satisfaction’, *sánti-* ‘peace’, *kṣiti-* ‘dwelling’ (cf. Greek κτίσις ‘founding, foundation; settlement’), etc. This suffix was also used to create agent nouns and adjectives in Indo-European.
14. *-wi*, *-bi* in animal names: *erbi* ‘dog’; *serrewi* ‘lamb’. In Indo-European, the suffix *\*-bhos* was not widespread — as a primary suffix, it only remained productive in Balto-Slavic. As a secondary suffix, it was used to form animal names, as illustrated by the following examples from Sanskrit and Greek: Sanskrit *r̥ṣa-bhá-* ‘bull’, *vṛṣa-bhá-* ‘male, man, bull’, *r̥áṣa-bha-* ‘ass’, *śera-bha-* the name of a snake; Greek κίραφος ‘fox’, ἔλαφος ‘stag’, ἔριφος ‘kid’.

## Some Considerations on the Syntax of Hurrian

Several kinds of sentences can be distinguished in Hurrian:

a) Adjectival predication, without copula:

<<sup>1</sup>Ma-ni-en-na-ma-an pa-aš-ši-i-it-hi-ib ni-i-ri tiš-ša-an> Mit. II 86  
'And Mani, your envoy, [is] good very much.'

b) Nominal predication, with copula:

<E-er-bi ma-a-an-nu-u> Kbo 32.14 Vo IV  
'A dog it is not'

c) Intransitive verbal predication:

<ku-ú-du ka-a-zi bé-el-le-e-ni> Kbo 32.14 I 57-58  
Hitt. *teššumiš-kan anda amiyari maušdu*.  
'Falls the cup into the canal!'

d) Transitive verbal predication:

<i-te-i-e ka-a-zi te-eš-šu-u-pa-aš> Kbo 32.14 I 56  
Hitt. *walahduyan <sup>d</sup>IM-aš teššumin*.  
'May Tešub destroy the cup!'

The last two examples are discussed in Neu (1988):

Der Vergleich mit dem Hethitischen hat gezeigt, daß das Hurritische als Ergativsprache keine besondere Akkusativform kennt. Der Bloße Stammkasus (Absolutiv) fungiert bei transitiver Satzkonstruktion als Objekt (*Kazi, elki* I 56, 57), bei intransitiver Konstruktion hingegen als Subjekt (*Kazi, elki* I 58), was sich mit Bezug auf die besprochenen Sätze formelhaft folgendermaßen darstellen läßt:

SUBJEKT<sub>Ergativ</sub> + OBJEKT<sub>Absolutiv</sub> + PRÄDIKAT<sub>Transitiv</sub>

SUBJEKT<sub>Absolutiv</sub> + ADVERBIALE + PRÄDIKAT<sub>Intransitiv</sub>

Im Indogermanischen hingegen, so auch im Hethitischen, wird zwischen dem Subjekt eines transitiven Satzes und dem eines intransitiven Satzes morphologisch nicht unterschieden.

Another typical feature of Hurrian sentences is the tendency to start with a string of morphemes made up of an adverbial word followed by enclitic pronouns together with a final particle, acting as a conjunction. This is well exemplified in the Mitanni letter:

<i-nu-ú-ut-ta-a-ni-i-in> Mit. I 74 *inu'u-tta-nin* 'how me and'  
<a-na-am-mi-til-la-a-an> Mit. I 76 *anami-tilla-man* 'thus us and'

Note this example with two strings in a row:

<un-du-ma-a-an in-na-me-e-ni-i-in> Mit. III 21 *undu-man inna-mä-nin* ‘And now then when her indeed’

This manner of initiating sentences has obvious parallels in the Anatolian branch of Indo-European. For more information on Hittite syntax, cf. Hoffner—Melchert (2008:406—429).

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## Nominal Morphology

### Hurrian Nominal Morphology

Hurrian is usually considered to be an ergative language. Typically, the root comes first. Nominal and verbal roots are not clearly differentiated. Nominal forms are indicated by the addition of a stem vowel (“thematic vowel”) to the root — this vowel can be lost when certain endings are added, such as that of the Instrumental \*-á(?)i <a-a-e>, which is the same for all nouns. The most common vowel was -i-/e-, but both -a- and (rarely) -u- were also found. Examples include: *arde-* ‘town’, *eni-* ‘god, deity’, *ašte-* ‘woman’, *tiwe-* ‘word, thing’, *eše-* ‘earth’, *šeni-* ‘brother’, *šawala-* ‘year’, *uthuru-* side’. The vowel -u is found in words with strong adverbial connections: *guru* ‘once’, *ashu* ‘top’, as noted in Wegner (2007:52). Some words end with a consonant, like *Kušuh* \*[kuz(u)γ]. These words seem to have -u- as stem vowel. Several pronouns have -i in the Absolutive but -u- in the other cases. The stem vowel is first followed by a derivational suffix, then by a relational marker (case form). Hurrian has two numbers (singular and plural) but lacks grammatical gender. The verbal suffix -gar- may represent the dual. Though Hurrian has a small number of non-derived adjectives, most adjectives are derived from nouns.

The so-called “definite article” (singular *-ne*; plural *-nna*) is actually an anaphoric suffix (cf. Wilhelm 2004a:106—107) that is inserted between the noun and the case endings. The singular is never used with the Absolutive case, but the plural is. Thus, we find the following patterning:

Case	Singular	Plural
Absolutive	-Ø	-na [nna]
All other cases	-ne *[n]	-na

According to Ugaritic examples, this morpheme was probably a geminate [nn]. The gemination can be explained as \*-Hn- > -nn-.

As noted, the Hurrian “definite article”, singular *-ne*, plural *-nna*, is best viewed as an anaphoric suffix. There may be a parallel here with Indo-European. In Indo-European, there is a demonstrative pronoun stem that is typically reconstructed as \*ne-, \*no-; \*H<sub>1</sub>e-no-, \*H<sub>1</sub>o-no-. It occurs in, for example: Sanskrit (Instr.) *anéna*, *anáyā* ‘this, these’; Lithuanian *añs*, *anàs* ‘that, that one’; Old Church Slavic *onъ* ‘that, he’; Hittite *an-ni-iš* ‘that, yonder’, also *na-aš*; Armenian *na* ‘that; he, she, it; him, her’ (cf. Burrow 1973:277; Pokorny 1959:319—321; Mayrhofer 1956—1980.I:32). This stem is best seen as a distal or yonder deictic particle at the Proto-Indo-

European level; it developed into a demonstrative pronoun in the individual daughter languages. The *H<sub>1</sub>e-no-*, *\*H<sub>1</sub>o-no-* variants are combinations of *\*H<sub>1</sub>e/o-* plus *\*ne/o-*.

The case markers are given in the following tables. The first table gives the written forms (cf. Bush 1964:120; Diakonoff—Starostin 1986:75; Friedrich 1969a:14; Wilhelm 2004a: 108).<sup>62</sup>

Case	Singular	Plural
Absolutive	-Ø	-Ø, -lla; -(a)š
Ergative	-š	-(a)šuš
“Accusative”	-n(i), -ne	-(a)šan-i/-e
Genitive	-we	-(a)še (< *-(a)š-we)
Dative	-wa	-(a)ša (< *-(a)š-wa)
Locative (in, at)	-a	-(a)š-a, -a
Allative (to)	-da	-(a)š-ta
Ablative (from, out of)	-dan	-(a)š-tan
Instrumental (with)	-ae	(?)
Ablative-Instrumental	-n(i), -n(e)	-(a)šani, -(a)šane
Comitative (together with)	-ra	-(a)šura
Equative (like, as)	-nna	-(a)šunna

The following tables give the interpretation of what underlies the written forms:

SINGULAR	a-stems	i-stems	u-stems
Absolutive	-Ø	-i	-u <sup>63</sup> / -i <sup>64</sup> / -Ø <sup>65</sup>
Ergative	-as	-is	-us
“Accusative”	-an	-in	-un
Genitive	-awi(:)	-iwi(:)	-uwi(:)
Dative	-awa	-iwa	-u(:)wa
Locative (in, at)	-a	-a	-a
Allative (to)	-ada	-ida	-uda
Ablative (from, out of)	-adan	-idan	-udan
Instrumental (with)	-a(:)?i <sup>66</sup>	-a(:)?i	-a(:)?i
Ablative-Instrumental	-ani:	-ini:	
Comitative (together with)	-ara	-ira	-ura
Equative (like, as) <sup>67</sup>	-anna	-inna	-unna

<sup>62</sup> On the whole, Speiser (1941:105) can now be considered to be fairly outdated on this issue.

<sup>63</sup> Typically after -wu ‘mine’.

<sup>64</sup> With pronouns; cf. *andi-* ~ *andu-*.

<sup>65</sup> Kušuh is a *u*-stem.

<sup>66</sup> Often written with plene writing \*[a(:)i]

<sup>67</sup> The so-called equative case marker -š described in Speiser (1941:204) is an erroneous analysis of person names.

PLURAL	a-stems	i-stems	u-stems
Absolutive	-aša / -áz	-iša / -íz	-uša / -už
Ergative	-a(:)žus	-ižus	-užus
“Accusative”	-ázan	-ižan	-užan
Genitive	-aži(:)	-iži(:)	-uži(:)
Dative	-a(:)ža <sup>68</sup>	-iža	-uža
Locative (in, at)	-áza	-iža	-uža
Allative (to)	-asta / -ašta	-ista / -išta	-usta / -ušta
Ablative (from, out of)	-astan / -aštan	-istan / -ištan	-ustan / -uštan
Instrumental (with)			
Ablative-Instrumental	-ázan(i:)	-ižan(i:)	-užan(i:)
Comitative (together with)	-ázura	-ižura	-užura
Equative (like, as)	-ážunna	-ižunna	-užunna

Case markers can be suffixed to the following kinds of bases:

- Nouns: *šeni* ‘brother’ > *šeni-we* (Gen); *allai* ‘lady’ > *allai-š* (Erg);
- Nouns with the article: *umini-na* ‘the lands’ > *umini-na-ša* (Dat pl);
- Nouns with possessive suffixes: *umini-wwu* ‘my country’ > *umini-wwu-wa* (Dat);
- Nominalized syntagms: *ar-uš-au* ‘I gave’ > *ar-uš-au-še-ni-we* ‘of the one I gave’;
- Compound words: *Ea-Šarri* ‘Ea-Šarri’ > *Ea-Šarri-ni* ‘the (god) Ea-Šarri (Abs)’;
- Derivatives: *pašš-* ‘to send’ > *pašš-ithi* ‘envoy’ > *pašš-ithi-nna* ‘the envoys (Abs)’.

There is nearly no limit to the number of suffixes affixable to a given base to the point of making them even hard to count: *aš-hu-ši-ku-un-ni-ni-bi-na-aš-ta* (XII 44 ii 6) ‘to those of the sacrificer’. The base is *ašh-* ‘high’: *ašh-u-š-i-kk-u-nni-ni-bi-na-š-da* is a possible segmentation, but other proposals are possible. The principle described by Speiser (1941:200) remains valid: “Derivational suffixes are placed ahead of the relational elements.”

The complements of a given item take the same case markers and the same article as this item: *nihar-ri-we ar-uš-au-še-ni-we* ‘of the dowry that I gave’. Both *nihari* ‘dowry’ and *arušauše* ‘that I gave’ display *-ni-* (definite article) and *-we* (Genitive). In general, complements come next, but in some cases, they are disposed otherwise: <u-ul-wi-ne-e-ma a-am-mi-i-ib u-um-mi-in-ni> KBo 32.14 Ro I 19-20 ‘And he reached the other country’. The function of *ulwi* is clearly indicated by the definite article *-ni*, which *umini* also displays.

The case markers and the definite articles are prosodically enclitic. When suffixed, they may cause the accent to move according to the prosodic classes of the words. It seems that only the Dative plural and the Instrumental were accented — they are the only cases attested with plene writing. Another explanation for the Dative plural is a compensatory lengthening out of unaccented *\*-až-wa* > *\*-a:ža*.

<sup>68</sup> [a(:)] is very often plene writing in the dative plural.

## Earlier Stages of Hurrian Nominal Morphology

As has already been noted, Hurrian is usually considered to be an ergative language. This means that the Absolutive case is used both for the subject of an intransitive verb and for the object of a transitive verb. The Ergative case was used as the subject of a transitive verb. However, there also appear to be traces of an Accusative in *-n(i)*, *-ne* (perhaps from earlier *\*m*/ as in Hittite and Greek within Indo-European) in animate forms.<sup>69</sup> This seems to indicate that ergativity is a recent development in Hurrian.<sup>70</sup> This is the point of view developed by Margaret Khačikjan, one of Diakonoff's students. According to her, as cited in Wegner (2007:33), the Babylonian form (or “dialect”) of Hurrian seems to be the most archaic representative, and it displays the ergative tendencies of the northern “dialects” to a much weaker extent. Speiser (1941:108) had preferred the word *Agentive* “in order not to imply a definite parallelism [with the Ergative of the Caucasic grammars] before it has been demonstrated beyond all doubt.”

At this time, other relationships within a sentence were indicated by means of particles. These particles later became integrated into the declensional system, though their original status as independent particles is still clear by their positioning (cf. Bush 1964:119). As shown in the discussion immediately following the presentation of the case formatives in Hurrian, many of these particles have parallels in Indo-European. We can envision an earlier period characterized by an active structure similar to what is assumed to have existed in the earliest Proto-Indo-European, thus:

Case	Animate	Inanimate
Inactive (> Absolutive)		-Ø
Active (> Ergative)	-s	
Patient (> “Accusative”)	-n	

<sup>69</sup> This is not at all unusual. As noted by Dixon (1994:6): “Many languages have some accusative and some ergative characteristics.” He further notes (1994:224): “Some languages are fully accusative but many (perhaps about one quarter of the languages of the world) show some ergative characteristics. No language has so far been reported that is fully ergative; that is, having an exclusively ergative system of intra-causal marking on core arguments, and also an exclusively S/O pivot for inter-causal operations such as coordination and subordination.” Dixon’s entire book is devoted to providing a full survey of both morphological and syntactic ergativity. Especially interesting is his discussion of how an accusative-type system can change into an ergative-type one and vice versa.

<sup>70</sup> The situation in Hurrian is reminiscent of what Fortescue (1998:103) describes for the Uralo-Siberian languages, especially Chukchi-Kamchatkan: “The lack of a case marking distinction between nominative and accusative (or at least a limited use of accusative marking) is an areal trait of the non-Altaic Siberian region (including Nivkh). This cuts across the distinction between nominative-accusative and ergative languages — thus Itelmen (nominative-accusative) and Chukchi (ergative) both have an absolute case. Two possible historical explanations suggest themselves: either an older accusative marker (e.g. *\*-m*) was lost in most of the modern languages (as in some Samoyedic), or the proto-language lacked the distinction too and the accusative marker, where found, is an innovation. The latter (minority) opinion is voiced by Raun (1998, 558) as regards Uralic. In 3.2 we saw that there is good reason to believe that the ergative Chukotkan languages developed from a nominative-accusative stage still reflected in Itelmen.”

In Hurrian, nominal forms are indicated by the addition of a thematic vowel to the root — this vowel can be lost when certain endings are added. The most common vowel was *-i*—*-e*—, but both *-a*— and (rarely) *-u*— were also found (cf. Bush 1964:103—104). According to Wilhelm (2004a:104), the only function of the thematic vowel *-i*— seems to have been to nominalize the root, while the thematic vowel *-a*— was found on kinship terms, some divine names, and a few other words. Bush (1964:104) notes that the thematic vowels were subject to frequent elision or assimilation. Such patterning may have existed in early Proto-Indo-European as well. We may speculate that the the original patterning was disrupted by new prosodic features developed in early Proto-Indo-European (for a discussion of the role of accentuation in different stages of the Indo-European parent language, cf. Lehmann 2002:202—208, who suggests a strong stress accent as the probable cause of quantitative vowel gradation and for the development of the syllabic allophones of the resonants [see also Burrow 1973:108—113; Brugmann 1904:138—150]). The thematic vowels *\*-e/o-* of traditional Proto-Indo-European appear to be a later development.

The original function of the nominal thematic vowels may have been as follows: *\*-i* (and perhaps *\*-u*) was used to mark the subject in active constructions, while *\*-a* was used to mark: (1) the direct object in active constructions; (2) the subject in stative constructions; and (3) the so-called “status indeterminatus”. Neither Proto-Indo-European nor Hurrian retained the original patterning. In both, the earlier system was superseded by one based upon the case formatives discussed above.

Thus, we can see that the core of both the Indo-European and the Hurrian case systems was identical. Later changes in each greatly expanded the number of case formatives, though each developed along different lines.

### The Hurrian Case Markers and Indo-European Parallels

There are important parallels between the Hurrian case markers given in the above tables and Indo-European (where possible, the Hurrian material is cited in the form given in Friedrich 1969a:14):

1. Hurrian Absolutive plural marker *-lla*: This may not be a morpheme proper but, rather, a deictic stem. Note the Proto-Indo-European demonstrative pronoun stem *\*H<sub>1</sub>ol-* ‘that over there, that yonder’. It occurs in: Latin (later variants of *ollus*, etc.) *ille*, *illa*, *illud* ‘that’, *olim* ‘at that time’, *ole*, *olle*, *ollus*, *olus*, *olla* ‘that’, *ultrā* (< *\*oltrād*) ‘beyond, on the far side, farther’; Umbrian *ulo*, *ulu* ‘there, at that place’; Old Church Slavic *lani* (< *\*ol-nei*) ‘last year’ (cf. Pokorny 1959:24—26 *\*al-*, *\*ol-* ‘beyond’). The initial *i*- found in the later Latin forms *ille*, *illa*, *illud* is usually explained as due to the influence of *is* ‘that’. This deictic stem may be preserved in Hurrian in the 3rd person plural Absolutive enclitic personal pronoun *-l(la)*, *-lle*, from which it spread to the nominal declension. Another possible explanation is that *-lla* may simply be the remnant of an old collective/plural marker, in which case there is nothing comparable in Indo-European. The geminate *-lla-* can be explained as *-Hla-*, parallel to *-Hn-* ~ *-n-*.

2. Hurrian plural marker *-(a)š* (cf. Bush 1964:114—115; Friedrich 1969a:14): In Indo-European, the Nominative plural athematic ending was *\*-es*, and the thematic form was *\*-ōs* (contracted from *\*-o-es*) (cf. Fortson 2004:113 and 115; Szemerényi 1996:160). Note that, in Hurrian, most of the plural case endings are built upon the plural marker *-(a)š*, to which the singular case endings have been added. In Proto-Indo-European, a plural marker *\*-s* is added after the endings: Acc. plural *\*-n+s/\*-η+s*; Abl.-Dat. plural *\*-bh(y)o+s*, *\*-mo+s*; Instr. plural *\*-bhi+s*, *\*-mi+s*, *\*-ōi+s* (these are Szemerényi's reconstructions [1996:160]).
3. Hurrian Ergative singular marker *-š* (*\*[s]* according to Ugaritic): Note the Proto-Indo-European Nominative singular athematic ending *\*-s*, thematic *\*-os* (cf. Fortson 2004:113—114; Szemerényi 1996:160 and 186). For a discussion of the prehistoric development of this ending in Proto-Indo-European, cf. Gamkrelidze—Ivanov 1995.I:233—244. We may note here that, according to Beekes (1985:192), the Nominative singular in *\*-os* was originally an Ergative.
4. Hurrian “Accusative” singular *-n(i)*, *-ne*: In Proto-Indo-European, the Accusative singular ending was (athematic) *\*-m/\*-m̥*, (thematic) *\*-o-m* (cf. Fortson 2004:113; Sihler 1995:248; Szemerényi 1996:160 and 186). Examples include: (Acc. sg.) *\*dónt-m̥* ‘tooth’ (cf. Sanskrit *dántam*; Greek *δόντα*; Latin *dentem*), *\*péd-m̥* ‘foot’ (cf. Sanskrit *pádam*; Greek *πόδα*; Latin *pedem*), and *\*wíkʷom* ‘wolf’ (cf. Sanskrit *vṛkam*; Greek *λύκον*; Latin *lupum*). In a number of daughter languages (Greek, Gothic, and Hittite, for example), final *\*-m* > *\*-n*: Greek (Acc. sg.) *ἵππον* ‘horse’ (cf. Sanskrit *ásvam*; Latin *equum*); Gothic (Acc. sg.) *hanan* ‘cock’ (< *\*χananun*); Hittite (Acc. sg.) *at-ta-an* ‘father’. The Accusative plural ending was (athematic) *\*-ns/\*-ηs*, (thematic) *\*-o-ns* (Burrow 1973:236—237; Fortson 2004:113; Sihler 1995:248); *\*péd-ηs* (cf. Sanskrit *pad-ás*; Greek *πόδας*; Latin *pedēs*); *\*wíkʷons* (cf. Sanskrit *vṛkān(s)*; Greek *λύκους* [< *\*-ovs*, still preserved in Cretan and Argolian]; Latin *lupōs*; Gothic *wulfans*).
5. Hurrian Genitive singular *-we* (*\*[w]* according to Ugaritic; *-we* or *-ú-e* in Cuneiform) (Friedrich 1969a:14 writes *-ue*) (< *\*-u+i*; the *-w-* represents the pre-vocalic form of the thematic vowel *\*u*): Though the usual Proto-Indo-European Genitive singular thematic ending is reconstructed as *\*-es/-os* (cf. Burrow 1973:233; Fortson 2004:113; Szemerényi 1996:186), Italic, Venetic, and Celtic point to earlier *\*-ī* (< *\*-iH*) instead. *\*-ī* is added directly to the stem, without thematic vowel. No satisfactory explanation has been given for the origin of this ending. Perhaps it represents a relic form.
6. Hurrian Dative singular *-wa* (*-wa* or *-ú-a* in Cuneiform) (Friedrich 1969a:14 writes *-ua*) (< *\*-u+a*; the *-w-* represents the pre-vocalic form of the thematic vowel *\*u*): In Proto-Indo-European, the Dative singular is usually reconstructed as athematic *\*-ei*, thematic *\*-ōi* (< *\*-o-ei*). In Old Hittite, however, there is a Directive singular ending in *-a*. This was formerly thought to be a Dative. Though there have been attempts to derive this ending from earlier *\*-ōi* (< *\*-o-ei*), none of the explanations offered to date is convincing. Rather, this is best seen as a relic form preserved in Hittite but lost elsewhere throughout Indo-European. Though common in Old Hittite, the directive merged with the Dative-Locative in *-i* in later Hittite and in the other Anatolian languages.
7. Hurrian allative singular *-da* (Friedrich 1969a:14 calls this “directive”): Compare Proto-Indo-European *\*dě/\*dō* ‘to, towards; from’ found in: Hittite *-da* in: *anda* ‘in, into; within; in addition’, *andan* ‘in, within, inside’; Latin *-dō* in: *quan-dō* ‘when; when?’, (archaic) *en-do*, *in-du* ‘into’; *dē* ‘down from, away from’; Old Irish *do*, *du* ‘to’, *de* ‘from’; Old English *tō* ‘to’;

Lithuanian *da-* ‘up to’; Old Church Slavic *do* ‘up to, until’. More forms from the daughter languages can be found in Pokorný (1959:181—183 \**de-*, \**do-* demonstrative stem/base of various particles). It may be noted that the Tocharian A allative singular ending is *-ac*. The *-c* is usually derived from the Proto-Indo-European particle \**dě/\*dō* ‘to, towards; from’ under discussion here.

8. Hurrian Instrumental singular *-ae* (< \*-*a+He*): Szemerényi (1996:160 and 186) reconstructs the Proto-Indo-European Instrumental singular athematic as \*-*e/-o* and the thematic as \*-*ē/-ō*. Burrow (1973:232) derives the latter from \*-*eH<sub>I</sub>*/-*oH<sub>I</sub>*, as does Fortson (2004:113).
9. Hurrian comitative singular *-ra*: Note the Proto-Indo-European conjunctive particle \**H<sub>4</sub>er/* \**H<sub>4</sub>r* (> \**ar/\*r*) ‘and, also’ found in: Tocharian B *ra* ‘also’; Greek *ἀπα*, *ἀρ*, *πα*, *ἄπα* ‘then, straightway, at once’; Lituanian *iř* ‘and; too, also’, *ař* ‘whether, or’; Latvian *ar* ‘with; also’.
10. Hurrian Ablative-Instrumental *-n(i)*, *-n(e)*: One of the salient characteristics of Indo-European noun morphology is the heteroclitic declension. Here, the Nominative-Accusative singular is characterized by \*-*r-*, while the other cases are characterized by \*-*n-*. This declensional type is quite productive in Hittite, but it is in decline in the other daughter languages. A single example will suffice to illustrate the general patterning: Hittite Nom.-Acc. sg. *e-eš-har*, *e-eš-ha-ar*, *iš-har* ‘blood’, but Gen. sg. *iš-ha-na-aš*; Sanskrit Nom.-Acc. sg. *ásṛk* ‘blood’, but Gen. sg. *asnás*. It appears that the \*-*n-* forms derive from an earlier “oblique-*n*”, itself derived from the coalescence of still earlier endings: Genitive \*-*nu*, Dative \*-*na*, and Locative \*-*ni*.
11. Absolutive *-i*: The Hurrian-Hittite bilingual reveals a huge number of Absolutives being used with no case marker but with Locative meaning. This suggests that the Proto-Indo-European Locative ending \*-*i* may originate in a functional reinterpretation of \*-*i*. This would also explain why this case marker only appears in the singular in Proto-Indo-European.
12. Elidable *-i* in *allai* ‘lady’, *attai* ‘father’, *uštai* ‘hero’ which only appears in the Absolutive and Ergative cases of words related to persons. Wilhelm (2004:105) calls this elidable *-i* an “Honorificum” *-i*. This seems to be the nominalizer *-i* applied to (baby-talk) appellatives: *alla*, *atta*, *šäna*, *äla*. *Uštai* is the only word that does not display the *-aCa-* phonetics. It is unclear if the word *nära* ‘mother’ takes the elidable *-i* — note the case of *šäni* ‘brother’ but *šän-a-b* ‘your brother’, where *-a-* is unexpected.<sup>71</sup> This morpheme can be compared with the Proto-Indo-European Vocative ending \*-*e* of thematic stems, found, for example, in: Latin *lup-e*; Greek *λόκ-ε*; Lithuanian *vilk-ė*; Old Church Slavic *vlvč-e*.

## Ergativity in Hurrian

In Hurrian, there is no case marker for the Absolutive: <E-er-bi ma-a-an-nu-u> (Kbo 32.14 Vo IV) ‘A dog it is not’. Here, *erbi* ‘dog’ bears no marker.

The case marker for the Ergative in Hurrian is *-š*, and the object apparently remains unmarked: <a-a-i [...] pa-a-pa-an-ni [...] i-ti-la-a-an-ni Te-eš-šu-u-pa-aš> (adapted from Kbo

<sup>71</sup> This may be a solution to the proximity of \**šänai-wwu* => *šani-wwu* ‘my brother’ and \**šänai-b* => *šana-b* ‘your brother’, where the spirantization of *-b* causes a risk of homophony. It is possible that *äli/älä* ‘sister’ has the same feature, but attestations are too limited.

32.14 Ro 1) ‘May Teššup destroy the mountain’. *Teššub* is signaled as the subject by -š and *papan-ni* ‘the mountain’ has no marker. In general, in the Hurro-Hittite bilingual discovered in 1983, words appearing in the Ergative case are persons, but inanimate objects like *papan* ‘mountain’ or *kaballi* ‘copper’ are also attested in the Ergative case. One of the most intriguing sentences is this one, where the subject is unexpectedly in the Absolutive case: <<sup>m</sup>Me-e-ki-ne-e ti-bé-na <sup>d</sup>IM-ub-u-ta; ku-un-zi-ma-i ka<sub>4</sub>-ti-ya> (Kbo 32.15 Vo IV 12—13) ‘Meki the words toward Teššub kneeling says’. Meki, a person, is not marked in the Ergative case, in spite of being the subject. The verb *kadi* ‘to say’ has, nevertheless, an explicit object *tiwe-na* ‘the words’. There are several examples of this construction. But anyway, *words* do not kneel, and they do not speak; only *Meki* would kneel and speak. Hurrian seems to dispense with grammar when possible. Another item is <e-la wa-ah-ru-ša da-a-an-ti-ib [...] <sup>d</sup>A-al-la-a-ni> KBo 32.13 Ro I 12-13 ‘A feast magnificent did the goddess Allani organize’. The verb is transitive (-i-b), but the subject bears no Ergative case marker. Speiser himself in (1941:108) had noticed that the “Agentive” suffix was sometimes dispensed with, as in <e-en-na-aš> KUB XXV 42 v 6, where <e-en-na-aš-šu-uš> is expected, which accounts for his reservations about Hurrian being an Ergative language. On the whole, this can also “reflects the effort which Hurrian made to keep the subject in the forefront of the utterance”, as noted by Speiser (1941:206). To some extent, this means that the case-markers mainly confirm the grammatical functions of the words, which are expected from their relative positions in the sentence.

As already mentioned, the object is usually unmarked, even when it refers to an animate, like a ‘deer’ <na-a-li>: <na-a-li u-ul-bi-i-ni pa-pa-an-ni ha-pa-a-na-ab> ‘the deer (to) the other mountain moved’ (Kbo 32.14 Ro I 2—3), where *nali* ‘deer’ is subject, can be compared with <ku-ut-te na-a-li ke-e-bé-él-la-a-šu-uš> ‘may the hunters fell the deer’ (Kbo 32.14 Ro I), where *nali* is object, with no formal change.

So it seems that the case is closed and that Hurrian is an Ergative language, and it should not have an Accusative case at the same time. But then, some sentences seem to contradict this. For example, in the Mitanni letter, Mit. I 114—115:

114. I [Gi]-li-i-an [pa-aš]-ši-i-it-hi-ib-wə	I [Ma-ni]-en-na-a-an [pa-aš]-ši-i-it-hi-ib
Giliaum ambactum meum	Maninam ambactum tuum
115. [na]-ak-ku-ša-a-ú ú-ú-na-a-al-la-a-an	še-e-ni-ib-wə-ta
missi	veniendos
	ad fratrem meum.

The ending *-an* is usually translated as ‘and’, mainly because the standard approach of ergativity is that it should exclude an Accusative. Is this not a clear case of Accusative, with both *Gilia* and *Mani* being in the Accusative *singular* and the participle of the verb *una-* ‘to come’ being in the Accusative *plural* *-alla-a-an*? The translation made by Wilhelm abides by the option that *-an* is ‘and’:<sup>72</sup> ‘And *Gilia*, my envoy, and *Mani*, your envoy, I sent them and they are coming to my brother’. But here, this translation seems to miss something of the real structure of that sentence, where the Accusative marker is elegantly reconnecting *Gilia*, *Mani*, and the verb *una-* in the next line. Another intriguing case of reconnection by the Accusative marker is this sentence from Mit. IV 33—34:

<sup>72</sup> In French in Moran (1987:141).

- <aš-ti-i-in še-ni-ib-wu-ú-e>  
‘The wife of my brother’
- <a-ru-u-ša-ú še-e-ni-ib-wu-ú-e-ni-e-en tiš-ša-a-an-na ši-ra-aš-še>  
‘I gave [who] is so pleasant to the heart of my brother’.

These phenomena are not described in the existing literature. In both cases, there is a non-finite verbal form in the sentence, and the Accusative marker seems to be used to make sure that this verbal form is not interpreted as referring to the subject but as referring to the object.

Another intriguing sentence with a double Accusative is: Mit. II 11 <un-du-ma-a-an še-e-ni-ib-wu-ú-e-en aš-ti a-ru-u-ša-ú> ‘and now, I gave my brother a wife’. Another extraordinary example with a double subject is: Mit. II 49 <še-e-ni-ib-we-e-en at-ta-ar-ti-ib-wə-tan tiš-ša-an-na-ma-an an-zu-an-nu-u-ḥu-ša-a-ú> ‘I and many things from my fathers have rejoiced my brother’. In these sentences, because of <-ma-(a)-an>, the ending *-e-en* cannot be interpreted as meaning ‘and’. Speiser (1941:167—175) devotes ten pages to a discussion of the suggestion that the particle *-n* may, indeed, be the case marker of the Accusative. Several sentences are listed as examples, but Speiser (1941:169) does not discuss the above sentence (Mit. I 114—115). Ultimately, Speiser concludes that ‘no decision can be reached’.

Our proposal would be to classify the Hurrian case markers in a hierarchy of optionality. The Ergative marker *-š* is the first to be expressed. The Accusative marker *-n* is most often dispensed with, but it can be resorted to if the balance of the sentence makes it necessary.

What is illustrated with a sentence such as <<sup>m</sup>Me-e-ki-ne-e ti-bé-na <sup>d</sup>IM-ub-u-ta; ku-un-zi-ma-i ka<sub>4</sub>-ti-ya> (Kbo 32.15 Vo IV 12—13) ‘Meki the words toward Teššub kneeling says’ is that there must have been a certain amount of fluidity in Old Hurrian. Another example of a word inserted with no case marker is <<sup>m</sup>Me-e-ki pé-é-bé ti-ša-ab : a-na-aš-ti-ik-ki> KBo 32.15 Ro I 20'—21' ‘Meki, your heart of yours does [will]<sup>73</sup> not rejoice’.

## Traditional Reconstruction of Proto-Indo-European Nominal Morphology

The older Indo-European daughter languages (Sanskrit, Greek, Latin, Gothic, Old Church Slavic, etc.) have rich and complex inflectional morphologies. According to the traditional (“Neogrammarian”) reconstruction of Proto-Indo-European nominal morphology, the following are posited:

1. Eight cases: Nominative, Vocative, Accusative, Genitive, Ablative, Dative, Instrumental, and Locative;
2. Three numbers: singular, dual, and plural;
3. Three genders: masculine, feminine, and neuter.

Szemerényi (1996:160), for example, reconstructs the following case endings for Proto-Indo-European (see also Fortson 2004:104—107 and 113; Clackson 2007:92—100; Brugmann 1904:373—399):

<sup>73</sup> The Hittite translation <tu-uš-ke-ez-zi> has the future tense, but Hurrian has the Present tense.

Case	Singular	Dual	Plural
Nominative	*-s, *-Ø	} *-es	} *-e, *-ī/*-i
Vocative	*-Ø		
Accusative	*-m/*-m̥	*-ns/*-n̥s	
Genitive	*-es/*-os/*-s	*-om/*-ōm	*-ous (?), *-ōs (?)
Ablative	*-es/*-os/*-s; *-ed/*-od	} *-bh(y)os, *-mos	} *-bhyō, *-mō
Dative	*-ei		
Instrumental	*-e/*-o; *-bhi, *-mi	*-ōis; *-bhis, *-mis	
Locative	*-i	*-su	*-ou

An important distinction is made between thematic stems (those ending in \*-e/o-) and athematic stems (those lacking a thematic vowel). There are also other differences depending upon stem type, and several declension classes are, accordingly, recognized. This complexity reflects what is found in Sanskrit. The remaining older Indo-European daughter languages typically have fewer cases, and this has traditionally been thought to be due to loss on their part from the more complex system typified by Sanskrit.

The athematic stems show an intraparadigmatic accent shift that is, at least partially, correlated with changes in Ablaut. The accent falls on the stem in the so-called “strong” cases (Nominative-Accusative-Vocative) but on the ending in the so-called “weak” cases (all others). In thematic stems, on the other hand, the position of the accent typically remains fixed on the same syllable (either on the root or the suffix) throughout the paradigm.

The thematic stems have a special paradigm for neuter stems (Nominative-Accusative singular \*-o-m [cf. Sanskrit *yugám* ‘yoke’]) and also a unique Ablative singular ending (\*-ed/\*-od [cf. Sanskrit *vṛkād* ‘wolf’]). In the older non-Anatolian daughter languages, the thematic stems have grown in importance — to the point that most of the athematic stems have been replaced.

An important stem type is the so-called “heteroclitic” stems. They are characterized by \*-r- in the strong cases and \*-n- in the weak cases, as exemplified by the Sanskrit word for ‘blood’: Nom.-Acc. sg. *ásṛk*, but Gen. sg. *asnás* (note the change in the position of the accent as well). This was an old stem type, productive in Hittite but moribund in the other daughter languages.

The typical structure of inflected forms is *root + suffix + inflectional ending*.

Adjectives exist as a separate morphological category and agree in gender and number with the nouns they modify. Three degrees of comparison (positive, comparative, superlative) are traditionally reconstructed.

Finally, it should be noted that nominal composition played an important role in Proto-Indo-European, and several different types of compounds are recognized. The inherited system of nominal composition was greatly expanded in Sanskrit (for details, cf. Burrow 1973:208—219).

## The Deep Foundations of Proto-Indo-European Nominal Morphology

Proto-Indo-European is traditionally assumed to have been a highly inflected language — except for particles, conjunctions, and certain quasi-adverbial forms, all words were inflected. The basic structure of inflected words was as follows: root + suffix (one or more) + inflectional ending. A notable morphophonemic characteristic was the extensive use of a system of vocalic alternations (“Ablaut” in German) as a means to mark morphological distinctions. Verbs were strongly differentiated from nouns. For nouns and adjectives, three genders, three numbers, and as many as eight cases were reconstructed (see above). The Neogrammarian reconstruction of the Proto-Indo-European verbal system set up two voices, four moods, and as many as six tenses.

The discovery of Hittite and related Indo-European Anatolian languages (Palaic, Cuneiform and Hieroglyphic Luwian, Lycian, Lydian, etc.) forced a reappraisal of the traditional reconstruction. While manifestly Indo-European in its structure, Hittite cannot possibly be derived from the form of Proto-Indo-European reconstructed by the Neogrammarians. For example, while Hittite maintained most of the case endings traditionally reconstructed, at least in the singular, Old Hittite also had a directive case. Moreover, Hittite lacks the dual number and feminine gender. Instead of the three genders of traditional grammar, Hittite has a two-gender system: common and neuter (sometimes called “animate” and “inanimate”, respectively). The common gender corresponds to the masculine and feminine of traditional grammar. The plural is less fully developed than the singular (cf. Fortson 2004:165). The heteroclitic stems are a highly productive class. Recently, scholars have even claimed to have found traces of an Ergative-type construction. Finally, it may be noted that Hittite lacks the complex nominal composition found in the non-Anatolian daughter languages. In all aspects, Hittite appears to represent a more archaic stage of development. This has led to the realization that (cf. Drinka 1995:4):

1. There is no basis for projecting all of the morphological complexity of Sanskrit and Greek into Proto-Indo-European, as was done by the Neogrammarians. There is no sign of much of this complexity outside the eastern area.
2. The simplicity of the Hittite morphological system represents archaism, to a large extent, not loss, though, to be sure, innovations can be found in Hittite as well.
3. The distribution of morphological features across the Indo-European languages cannot be accounted for by positing a unified proto-language, or even a proto-language that was dialectally diverse on a single synchronic level. Rather, it must be admitted that Proto-Indo-European was not a single entity in space or time and that the Indo-European daughter languages developed from different chronological stages, that is, that they had different points of departure from a dynamic proto-language.

The first main split in the Indo-European family was between the Anatolian branch and the rest of the Indo-European daughter languages attested elsewhere in Eurasia. At the time of this split, the feminine gender of later Proto-Indo-European had not yet come into being, and there were only two gender classes: (1) “common” gender (animate) and (2) neuter (inanimate) (cf. Lehmann 2002:65—67; Fortson 2004:103; Clackson 2007:104—111).

The following athematic case endings may be assumed to have existed in Proto-Indo-European at the time that the Anatolian languages split off:

Case	Common	Neuter
<b>Singular:</b>		
Nominative	*-s	
Nominative-Accusative		*-Ø
Vocative	*-Ø	
Accusative	*-m/-m (or *-n/-n)	
Genitive-Ablative	*-es/-os/-s	*-es/-os/-s
Dative-Locative	*-ey/-i	*-ey/-i
<b>Plural:</b>		
Nominative-Vocative	*-es	(collective *-(e)H <sub>4</sub> )
Nominative-Accusative		
Genitive	*-om	*-om

The following thematic case endings may be reconstructed for the same period:

Case	Common	Neuter
<b>Singular:</b>		
Nominative	*-o-s	
Nominative-Accusative		*-o-m
Vocative	*-e	
Accusative	*-o-m (or *-o-n)	
Genitive	*-o-s	*-o-s
Ablative	*-ōt (< *-o-et)	*-ōt (< *-o-et)
Dative-Locative	*-ōy (< *-o-ey)/*-e/o-y	*-ōy (< *-o-ey)/*-e/o-y
Directive (?)	*-e/o	
<b>Plural:</b>		
Nominative-Vocative	*-ōs (< *-o-es)	
Nominative-Accusative		*-e-H <sub>4</sub>
Genitive	*-ōm (< *-o-om)	*-ōm (< *-o-om)

There have been several serious efforts to ascertain the salient characteristics of the earliest form of the Proto-Indo-European morphological system — Lehmann refers to this period as “Pre-Indo-European”. Until fairly recently, it was common to think in terms of ergativity. In Ergative languages, the subjects of intransitive verbs and the direct objects of transitive verbs are treated identically for grammatical purposes, while subjects of transitive verbs are treated differently. This is what Kenneth Shields proposes, for example, in a number of works. Beekes may be mentioned as another who suggests that Proto-Indo-European may have once had an Ergative type system. However, the majority of Indo-Europeanists no longer consider ergativity to have been a characteristic feature of the Proto-Indo-European morphological system at any stage in its development, including Pre-Indo-European.

According to Lehmann (2002:185), three endings represent the most ancient layer in Proto-Indo-European noun morphology and came to provide the basis for the development of the

central case system; these endings are: *\*-s*, *\*-m*, and *\*-H* (Lehmann writes *\*-h*). Lehmann notes that *\*-s* indicated an individual and, when used in clauses, identified the agent; *\*-m* used in clauses indicated the target; and *\*-H* supplied a collective meaning. Other relationships within a sentence were indicated by means of particles. The extensive case system reconstructed for Proto-Indo-European by the Neogrammarians was a much later development and was the result of an expansion of an originally limited core of basic case formants.

Thus, following Lehmann, the following case forms may be assumed to have existed in Proto-Indo-European at the earliest recoverable stage of development:

Case	Common	Neuter
Nominative	-s	
Accusative	-m	
Nominative-Accusative		-m / -Ø

A deeper stage of development is investigated later in this book. It bears repeating that other relationships within a sentence were indicated by means of particles during the earliest period of development and that the case formatives traditionally reconstructed for Proto-Indo-European were later developments.



# 5

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## Pronouns, Numerals, Adpositions, Conjunctions, Adverbs

### Hurrian Personal Pronouns

Hurrian had a set of possessive suffixes as well as a series of independent and enclitic personal pronouns.

The independent and enclitic stems were as follows:

SINGULAR	First Person	Second Person	Third Person
Absolutive	ište *[isti:]	be *[bi:]	mane, mani, -nna
Accusative (enclitic)	-at(ta) <sup>74</sup>	-am(ma) <sup>75</sup>	-a(n), -ma
Ergative	išaš *[izas]	beš *[bi:s] <sup>76</sup>	manuš
Genitive	šuuwe *[su?uwi]	bewe *[bi:wi] <sup>77</sup>	
Dative	šuuwa *[su?uwa] <sup>78</sup>	bewa *[bi:wa]	
Locative			
Allative	šuta *[su:da]		
Ablative			manutan
Comitative	šura *[su?ura]		manura
Equative			manuunna

Note: The alternation between <w> <m> and <b> may be only graphemic, and the underlying morpheme is probably /b/ [w, b]. As noted by Thureau-Dangin, the Semitic word *awat* can be written *awat*, *abat*, or even *amat* in late cuneiform.

<sup>74</sup> This unexpected form is probably from the assimilation of the Old Hurrian -d- (P3) with -w- (P1), hence -tt-.

<sup>75</sup> This may be from -d- (P3) and -b- (P2), with a dissimilation into -mm- to avoid confusion with P1 -tt-. The resulting distribution of -m- and -t- is the exact opposite of what is found Proto-Indo-European.

<sup>76</sup> <we-e-e\$>

<sup>77</sup> <we-e-we, be-e-be>

<sup>78</sup> <šu-u-wa> with hiatus \*[u?u].

PLURAL	First Person	Second Person	Third Person
Absolutive	šattil, šattitil(la)	bella *[bi:ša]	manella
Accusative (enclitic)	-atil(la)	-ab(ba) <sup>79</sup>	-al(la)
Ergative	šieš *[si?is]	bešuš *[bi:žus]	manšuš
Genitive		beše *[bi:ší]	
Dative	šaša (?)	beša *[bi:ša]	
Locative			
Allative	šašuta (?)		
Ablative			
Comitative			manšura, manšora
Equative			

The “verb” *mann-* <ma-a-an-nV-> ‘(there) to be’ takes the enclitic pronouns:

- *mann-atta* ‘I am’ Mit. III 63, 65
- *mann-amma* ‘you (sg.) are’ Mit. III 10
- *mann-i* ‘he/she/it is’ Mit. IV 107
- *mann-atilla* ‘we are’ Mit. IV 109
- \**mann-abba* ‘you (pl.) are’ (not attested in the Mitanni letter)
- *mann-allā* ‘they are’ Mit. I 109

This “verb” is the same word as the pronoun *mane* used in a particular construction:

- *mani*<sup>80</sup> <ma-a-ni> ‘he/she/it (Abs)’
- *mann-u* <ma-a-an-nu-u> ‘he/she/it is not’
- *mann-ukku* (negative impersonal) ‘no’ (literally ‘Ø is not’)
- *mann-ubur* <ma-a-an-nu-u-bur> ‘this is not’ (emphatic form ?) KBo 32:14 I 17

This has been recognized by Speiser (1941:86—87): “The assumption of two independent stems is discouraged by the orthography, which treats both sets of forms alike. Nor is it favored by morphology, in that *manni* betrays its independence [from real verbs] by dispensing with the normal intransitive suffix -a.” And also: “This use points to a periphrastic function of *man(n)-* which accords well with a verb meaning ‘to be’.”

The negation is expressed with the insertion of -ukk-: *mann-ukk-allā* ‘they are not’. Most negative forms are not attested.

Adjectives used as predicates do not require any copula:

<<sup>l</sup>Ma-ni-en-na-ma-an pa-aš-ši-i-it-hi-ib ni-i-ri tiš-ša-an> Mit. II 86  
‘And Mani, your envoy, [is] good very much.’

<sup>79</sup> Probably from the assimilation of -ll- ‘plural’ and \*-b ‘P2sg’.

<sup>80</sup> Oblique cases are built on <ma-a-nu-> with -u- as it occurs for most pronouns.

It can also be noted that the Ergative case marker *-š* is dispensed with when suffixed by the enclitic Accusative pronouns:

- *iša-lla-* 'I (verb) them' Mit. III 54
- *seni-wwu-tta* 'my brother (verb) me' Mit. II 50
- <<sup>d</sup>Ši-mi-i-gi-ni-e-ti-la-an> 'the god Šimigi (may love) us' Mit. I 77

With these enclitic Accusative pronouns, the Ergative marker is made redundant. But it is kept when both the subject and the object are the 3rd person:

- *seni-wwu-šš-a-an* 'and my brother (verb) him' Mit. III 1

The enclitic pronouns can also be suffixed to the adverbs and conjunctions that appear at the beginning of the sentence, or to numbers and, of course, to verbs:

- *inu-tta-nin* 'How me (my brother loves now)' Mit. I 74
- *ai-lla-an* 'If them (...)' Mit. II 75
- *tumni-lla* 'the four (ones)'
- <a-ru-la-ú-un-na> 'I (will) bring it' KBo 32.15 Vo IV 15
- <<sup>d</sup>A-al-la-ni-ma ta-a-ti-ya-aš-ši <sup>d</sup>IM-up-pa-ma : tap-ša-a-ḥa mé-e-ḥa> KBo 32.13 Ro 28—29 'The goddess Allani, who loves him, toward Teššub as an échanson is standing'.

Sometimes, the enclitic pronoun does not appear in the clause to which it belongs, as in the following paragraph in KBo 32. 15 Vo IV:

- < 7. *ti-wu-uš-ḥi-ni ḥa-ši-im-ma* <sup>m</sup>Me-e-ki-né-ella >
- < 8. *a-li-nu-um* (:) “*u-uh-ni* <sup>m</sup> Me-e-ki” *i-ši-ik-ku-un-na* >

'7. And Meki, hearing the order, about them (?) [suffixed to Meki] 8. whining: 'woe on Meki', said he. The structure of the sentence is all the stranger as *-lla* is plural but *tiwušhini* is singular, and both verbal forms *alinu-* and *išikku-* are intransitive. One hypothesis would be that the rationale for this component is to rhyme with the next line (?).

The enclitic pronouns are sometimes pleonastically suffixed. This is attested in the Hurrian-Hittite bilingual and in the Mitanni letter:

- <a-ma-at-te-na e-en-na <sup>d</sup>IM-wa-al-la : na-ah-ḥu-šu wa-an-ti-in> KBo 32.13 Ro I 25-26
- = Hitt. <ka-ru-ú-li-uš-ma-za DINGIR<sup>MEŠ</sup>-uš : <sup>d</sup>IM-aš ZAG-az a-ša-aš-ta> KBo 32.13 Ro II 26-27
- 'The ancient gods, she (the goddess Allani) placed them to the right to [not of] Teššub'

Mit. I 76-77 (five instances of *tilla*, *tila* 'us')

- a-nam-mi-til-la-a-an <sup>d</sup>[Te]-e-eš-šu-pa-aš <sup>d</sup>Ša-uš-gaš <sup>d</sup>A-ma-a-nu-ú-ti-la-an
- <sup>d</sup>Ši-mi-i-gi-ni-e-ti-la-an <sup>d</sup>E-a-a-śar-ri-ni-e-ti-la-an ma-an-šu-u-til-la-a-an

It can also be noted that the Ergative case marker is dispensed with three times.

<a-na-am-mi-it-ta ha-a-ši-im-ma da-du-hi-pa-at-ta> KBo 27.99 + Vo III 63

x -- : -- x : -- x : x x x (x) : -- x

‘And thus me Tadu-heba has heard me’

Obviously, the enclitic pronouns are an easy device to fill dactylic hexameters. It can also be noted that Tadu-heba was probably pronounced \*[tadu-xpá], otherwise the verse has an extra syllable.

The possessive suffixes were added to nouns or nominalized verbs. They were as follows:

SINGULAR	First Person	Second Person	Third Person
Word final	-wwe *[-wí]	-b *[-b]	-a
If not final	-wwu- *[-wú]	-be- *[-bí]	-(y)i-

PLURAL	First Person	Second Person	Third Person
Word final		-ssé <sup>81</sup>	
If not final	-wwaś *[wáz]	-ssé	-yaś *[-jaź]

The possessive suffixes are suffixed to the Absolutive case of nouns, and the words with elidable *-i* keep it.

Examples: (1) *šeni* ‘brother’: *šeniwu-* ‘my brother’, *šena-b* ‘your brother’, *šena-* ‘his brother’; (2) *attai* ‘father’: *attaiwu-* ‘my father’, *attaibu-* ‘your father’, *attayi-* ‘his father’, *attaiwaś* ‘our fathers’; (3) *harra-* ‘his road’; (4) *umini* ‘country’: *uminiwwe* ‘my country’, *uminiwuwa* ‘to my country’, *uminiib* ‘your country’, *uminiwaś* ‘our country’, *uminiyaś* ‘their country’; (5) *eni* ‘god’: *enāš* <e-en-na-aš> ‘his god (Erg)’; (6) <e-te-šu-ú-ta> ‘to yourselves, to your body (Dir)’, *ulme-ssé* ‘your weapon(s ?)’.

The possessive suffixes are not prosodically enclitic, though suffixed. They are attested with plene writing: \*[-wú-], \*[-bí-], [-wáz-]. Only the third person suffixes were unaccented. The possessive suffixes were added to the Nominative of the word which seems to retain its original accent. Prosodically, bases and possessive suffixes behave as independent units.

When compared with the possessive suffixes, the independent pronouns are identical for the second person: the base is \*/b/ to which case markers and the plural are added. However, for the first person, the situation is more complex: the common morpheme is \*/uw/, which can also be found as a verbal ending. This morpheme seem to be added to \*/su?-/. As for the plural, it appears to be the pluralization of a base \*/sat-/, which also appears in the singular <ištē>. Speiser (1941:28 and 68) proposes an interesting analysis of this base \*/sat-/. Mit. IV 62 has <ša-[at]-ta-a-al-la-] ‘them together’, where *-lla-* is ‘them’. Speiser follows Thureau-Dangin (RA

<sup>81</sup> “nicht bezeugt” (“not attested”) according to Diakonoff (1971:93). But these forms are now attested in the Hittite-Hurrian bilingual.

36 [1939]:23), who had previously analyzed <ša-at-ti-la> Mâri 6.13 as ‘we together’. This means that this base *šat-* has nothing to do with P1. This analysis is confirmed by the following sentence in KBo 32.13 Ro I 9-10:

- <<sup>d</sup>IM-ub ša-at-ta ha-mu-u-ra šu-úr-ru-ú >
- <ti-me-er-re-e e-še-ni du-ú-ri >
- ‘9. Teššub together with Ḥamu<sup>82</sup> went 10. (to) the dark ground below’.

The underlying Proto-Hurrian personal pronouns are:

	First Person	Second Person
Singular	*i	*bi
Plural	*i-lla	*bi-lla

### Hurrian Personal Pronouns and Indo-European Parallels

Turning to Indo-European, we find the following (the Hurrian material is cited in the form given in Laroche’s *Glossaire* and Friedrich 1969a):

1. Hurrian first person singular personal pronoun stem: Absolutive singular (*ište*) and Ergative singular (*išaš*). It is clear that the stem here is *iš-* (Diakonoff—Starostin 1986:81 reconstruct a common Hurro-Urartian \**ez-*) to which case endings have been added. Perhaps a further analysis is possible — the stem may, in fact, be a compound: \**i+šu*. *šu*, in turn, is none other than the stem found in the other cases: Gen. sg. *šowe*, Dat. sg. *šowe*, Allat. sg. *šuta*, Comit. sg. *šura*, Equat. sg. *šonna*. In Proto-Indo-European, the paradigm of the first person personal pronoun is also suppletive — the Nominative singular has one stem, while the remaining cases are built on an entirely different stem (\**me-*). The evidence from the daughter languages points to several possible reconstructions for the first person personal pronoun (Nom. sg.): \**H<sub>1</sub>eǵ* (cf. Gothic *ik*); \**H<sub>1</sub>eǵoH* (cf. Latin *ego*; Greek ἐγώ); \**H<sub>1</sub>eǵoHm* (cf. Homeric ἐγών; Laconian ἐγώνη); \**H<sub>1</sub>eǵhom* (cf. Sanskrit *ahám*; Avestan *azəm*); \**H<sub>1</sub>eǵ* (cf. Latvian *es*; Lithuanian *aš* [Old Lithuanian *eš*]; Armenian *es*); \**H<sub>1</sub>eǵom* (cf. Old Church Slavic *azb*). This seems to indicate that this stem is a relatively late formation (though old enough to be represented in Hittite) and that it is composed of several deictic elements strung together. The first element is \**H<sub>1</sub>e-*, to which \**k-* or \**g-* or \**gh-* has been added, followed by \*-*OH* or \*-*om* (this analysis was first proposed by Karl Brugmann). It is the first element (\**H<sub>1</sub>e-*) that may be compared with Hurrian \**i-* (< \**H<sub>1</sub>e-*), the form extracted above from the analysis of *iš-* as \**i+šu*.
2. Hurrian second person personal pronoun stem *we-* ‘you’ (Friedrich 1969a:15 writes \**ue-*): Compare the Proto-Indo-European second person personal pronoun stem \**we(-s)-*/*\*wo(-s)-*,

<sup>82</sup> «Hamu serait un autre nom de Tašmišu, frère et conseiller avisé de Teššub» in Catsanicos (1996:226). Cf. Haas, V. (1996:332 and 473).

(reduced-grade) \**u(-s)-* in: Sanskrit Acc.-Dat.-Gen. pl. *vas*, Acc.-Dat.-Gen. dual *vām* ‘you’; Latin Nom.-Acc. pl. *vōs*, Gen. pl. *vestrum*, Dat.-Abl. pl. *vōbīs* ‘you’; Old Church Slavic Nom.-Acc. dual *va*, Nom.-Acc. pl. *vy* ‘you’. Reduced-grade in: Greek Nom. pl. ὑμεῖς (also ὑμμεῖς), Acc. pl. ὑμμεῖς (also ὑμέας) (< \**us-me*) ‘you’. Perhaps also found in Proto-Indo-European in the second person Gen. sg. personal pronoun \**té-we* ‘your’ (that is, \**té+we*) found, for example, in: Sanskrit Gen. sg. *táva* ‘your’; Avestan Gen. sg. *tava* ‘your’; this element is also found in the Acc. sg. \**t(e)+wé* (> \**twé*) and Abl. sg. \**t(e)+w-ét* (> \**twét*) (cf. Burrow 1973:266; Sihler 1995:374 [paradigms 372—373]; Rasmussen 1987).

3. Hurrian third person (Abs. sg. indep.) *mane, mani*, (encl.) *-me, -ma* ‘he, she, it’: This may be compared with an old Proto-Indo-European demonstrative stem \**mo-* ‘this, that’ preserved only in relic forms in Celtic but (apparently) lost elsewhere: Welsh *ýma* (poetical *ýman*) ‘here’; Breton *ma, mañ* ‘here’; Cornish *ma* ‘here’. Hurrian also has *yame-, yeme-* ‘any’ (equivalent to Hittite *kuitki* ‘whatever, anything, everything’ [= Latin *quidque*], Akkadian *minummē* ‘whatever, anything, all’) a derivative of *ya, ye* ‘that, which’.
4. Hurrian third person (Abs. sg. encl.) *-n(na)*: This may be related to the Hurrian definite article (< anaphoric suffix), singular *-ne*, plural *-na* discussed above.
5. Hurrian second person (Abs. encl.) *-m(ma)*: In Proto-Indo-European, there are two suffixal elements that are added to the first and second person personal pronoun stems, both in the singular and the plural; they are: \*-*we* and \*-*me*. Examples include: (a) first person: Acc. sg. \**m(e)+me* (> \**me*), Gen. sg. \**me+me*; Acc. dual \**ŋH<sub>1</sub>+we*; Acc. pl. \**ŋs+me*, Dat. pl. \**ŋs+m-ei*, Abl. pl. \**ŋs+m-et*; (b) second person: Acc. sg. \**t(e)+we*, Gen. sg. \**te+we*; Acc. dual \**uH<sub>1</sub>+we*; Acc. pl. \**us+me*, Dat. pl. \**us+m-ei*, Abl. pl. \**us+m-et* (for details, cf. Sihler 1995:369—375). These elements are found in other pronoun types as well. Neither their origin nor their meaning is known, and opinions differ concerning their original distribution in the paradigms of the individual pronouns in the Indo-European parent language. Even so, their resemblance to the Hurrian Absolutive forms of the second person personal pronoun is striking: (independent) *we*, (enclitic) *-m(ma)*.

## Other Hurrian Pronouns

Hurrian had the following demonstrative, indefinite, relative, and interrogative pronouns:

- a) Demonstrative: **anni** ‘this’; **andi** ‘that’:  
 <an-ti ta-a-hi> = Hitt. <a-pa-a-aš LÚ-aš> ‘this man’ KBo 32.14 Ro I 18
- b) Indefinite: **uli, ulbi, ulwi** ‘other’; **akki...aki** ‘the one...the other’:  
 <u-ul-bi-i-ni pa-pa-an-ni> = Hitt. <ta-me-e-da-ni HUR.SAG-i> ‘the other mountain’ KBo 32.14 Ro I 2—3  
 <u-ul-wi-ne-e-(ma) [u]-um-mi-in-ni> = Hitt. <ta-me-e-da-ni KUR-ya> ‘the other land’ KBo 32.14 Ro II 19
- c) Indefinite: **šui** ‘all; everyone, everybody’:  
 Mit. I 71—3 <<sup>1</sup>Ma-ni-e-el-la-ma-an pa-aš-ši-i-it-hi-wu-uš wə-ru-u-ša-a-al-la-a-an ma-a-na šu-e-ni ti-we-e-e-na ta-a-nu-ša-a-uš-še-na> ‘And Mani, them, your envoy

saw them, this<sup>83</sup>, everything, the things that I did.'

Šui is often used with a demonstrative: <šu-e an-ti> Mit. I 57, <an-nu-dan šu-e-ni-e-dan> Mit. III 108, <an-du-ú-e-e šu-e-ni-e-e> Mit. III 9.

Šui is frequently completed by -ni-, -nna- or -lla- 'all the'.

d) Relative: **ya/ye** 'who, which, what', ya-ma- (sg), ya-lla- (pl):  
 Mit. III 57—59 <i-ša-aš e-e-ma-na-a-mu-ša-a-ú i-i-al-la-a-ni-i-in am-ma-ti-ib-wu-ush at-ta-ib-wu-uš at-ta-i-ip-pa we-e-wə ma-ka-a-an-na gi-pa-a-nu-lu-uš-ta-a-ass-še-na> 'As for me, I have multiplied ten times the gifts, which my grandfather, my father has profusely placed (before) your father (and) you.'

All of these pronoun stems have possible parallels in Indo-European (the Hurrian material is cited in the form given in Laroche's *Glossaire*):

1. Hurrian demonstratives *anni* 'this'; *andi* 'that' (Friedrich 1969a:16 writes *anti*-): We have already noted above the following demonstrative pronoun stem in Proto-Indo-European: \*ne-, \*no-; \*H<sub>1</sub>e-no-, \*H<sub>1</sub>o-no-.
2. Hurrian *a(k)ku* 'other' (Friedrich 1969a:16 writes *agu*-), *akki...aki* 'the one...the other'. This may be compared with Proto-Indo-European \*H<sub>4</sub>et-k<sup>w</sup>e 'and on the other hand', \*H<sub>4</sub>et- 'on the other hand', found in: Latin *atque* (usually before *h* and vowels), *ac* (usually before consonants) 'and, and also; and moreover, and even; and indeed, and so; and then, and suddenly; and especially', originally 'and on the other hand', *at* 'but, moreover'; Greek ἀτ- in ἀτ-άρ 'but, yet'; Gothic *ab-* in *ab-pan* 'but, however'.
3. Hurrian indefinite *uli* 'other': We discussed Proto-Indo-European \*Hol- above. There is an alternative stem, \*H<sub>4</sub>el- (> \*al-) (cf. Pokorny 1959:24—26 \*al-, \*ol-), that is the source of the following: Latin *alius* 'another, other, different', *alter* 'one of two; the one...the other'; Old Irish *aile* 'other'; Greek ἄλλος 'another; one besides'; Gothic *aljis* 'other'; Tocharian B *alyek* 'other, another'.
4. Hurrian indefinite *šui* 'all; everyone, everybody': Note here the Proto-Indo-European demonstrative pronoun (< deictic particle [cf. Gamkrelidze—Ivanov 119.1:336]) \*so 'this, that' found in: Sanskrit (m. sg.) *sá(-h)*, (f. sg.) *sā* demonstrative pronoun; Greek (m. sg.) ó, (f. sg.) ἡ demonstrative pronoun and definite article; Old Icelandic *sá*, *sí* 'that'; Tocharian B *se(-)* demonstrative pronoun. In Proto-Indo-European, the stems \*so and \*to- were combined together in a single paradigm — \*so was used in the Nom. sg., masculine and feminine, while the Nom. sg. neuter and all of the other cases were built on \*to- (cf. Burrow 1973:272). In Indo-European, the indefinite pronouns are derived from the relative/interrogative pronoun \*k<sup>w</sup>i-, \*k<sup>w</sup>o- 'who, which, what'.
5. Hurrian relative *ya/ye* 'who, which, what' (Friedrich 1969a:16 writes *iqa-* (*ije-*)): Compare the Proto-Indo-European relative stem \*H<sub>1</sub>yo- 'who, which' found in: Greek ὁς, ἡ, ὅ 'which'; Phrygian *ioς* 'which; this'; Sanskrit *yá-h* 'which' (cf. Pokorny 1959:283 \*io-; Fortson 2004:130 \*io- or \*H<sub>1</sub>o-; Szemerényi 1996:210 \*yos, \*yā, \*yod).

<sup>83</sup> Another idea would be: 'there is' or 'that is to say'.

## Hurrian Numerals

Wilhelm (2004a:115) lists the following numerals one through ten in Hurrian (see also Friedrich 1969a:16; Bush 1964:108):

	Cardinal	Ordinal
1.	šukki, šuga (?)	(?)
2.	šin(a)	šinzi
3.	kig(a)	kiški (< *kik=ši)
4.	tumni	tumušše, tumunzi
5.	nariy(a)	narišše
6.	šeže	(?)
7.	šindi	šendešši
8.	kira/i	(?)
9.	tamri/a	(?)
10.	eman	emanzi, emašši (?)

There is nothing comparable in Indo-European other than a superficial resemblance of the numeral *šeže* ‘six’ and Proto-Indo-European *\*s(w)eḱs* ‘six’. When the following Semitic forms are considered, however, it is clear that the Hurrian numeral ‘six’ is a borrowing from Semitic and, consequently, not related to the Proto-Indo-European numeral: Old Babylonian (m.) *šiššet*, (f.) *šiš(š)*; Akkadian (m.) *šeššet*, *šiššet*, (f.) *šiššu*; Hebrew (m.) *šiššāh*, (f.) *šēš*; Aramaic (f.) *šiθ*; Arabic (m.) *sittat*, (f.) *sitt*.

Wilhelm (2004a:115) notes the following fractions: *\*ša/eht-* ‘one-half’ and *tumanzalli* ‘one quarter of a shekel’. Hurrian *\*ša/eht-* ‘one-half’ may be compared with the Proto-Indo-European root *\*siH₂-* (> *\*sē-*) found in: (1) *\*sē-* ‘separately, apart’ (cf. Latin *sēd*, *sē* ‘without; apart’); (2) *\*sē-t-* ‘division, section’ (cf. Avestan *hāiti-* ‘division, section’; Latvian *sēta* ‘hedge, section, division, staff’); (3) *\*sē-mi-* ‘half’ (cf. Sanskrit [indeclinable] *sāmi* ‘half, incompletely, imperfectly, partially’; Greek [prefix] *ἡμι-* ‘half’; Latin [prefix] *sēmi-* ‘half’).

Another number is *nubi* ‘ten thousand’, and the suffix *-gar-* seems to be “dual”.

## Hurrian Adpositions, Conjunctions, Adverbs

The following Hurrian adpositions, conjunctions, and adverbs are attested (this material is cited in the form given in Laroche’s *Glossaire*):

1. **abi-n** ‘before’ [+Dative] (from **abi** ‘the front part’)
2. **abi-da** ‘toward’ [+Directive] (from **abi** ‘the front part’)
3. **adi** ‘thus, so’
4. **ai** ‘when, if’ [followed by a syntagma]
5. **anam(mi)** ‘thus, therefore’ [used in correlation with **inu(me)**]

6. **ayi-da, aye** ‘in the presence of’
7. **edi-da, edi-wa** ‘for, because of’; **edi-ye** ‘concerning’ (from **edi** ‘body, person’)
8. **henni** ‘now’
9. **guru** ‘anew, once again’
10. **inna** ‘when’
11. **inu** ‘how’
12. **ma** ‘and’
13. **panu** ‘although’
14. **šummi** ‘with’ (from the word **šummi** ‘hand’)
15. **tiššan** ‘very much’
16. **tumwa** ‘under’
17. **undu** ‘then, when’
18. **wuri-da** ‘in sight of’ (from **wur-** ‘to see’)

The following parallels with Indo-European may be noted:

1. Hurrian *abi-n-* ‘before’ and *abi-da* ‘toward’: Compare the Proto-Indo-European preposition *\*H<sub>1</sub>obhi* ‘to, towards; in front of, before; beyond’ found in: Sanskrit *abhi* ‘to, towards’; Gatha-Avestan *aibī* ‘to, unto, over’; Old Persian *abiy* ‘to, against, in addition to’; Old Church Slavic *obъ* ‘beyond’; Latin *ob* ‘in front of, before’.
2. Hurrian *adi* ‘thus, so’: Compare: Sanskrit *ádhā* ‘therefore, now, then; moreover, so much the more; and, partly’, *ádhā...ádhā* ‘as much as; partly partly’; Avestan *aða* ‘then, so’; Old Persian *ada-* ‘then’.
3. Hurrian *ai* ‘when, if’: Note the following: Hittite enclitic particle *-a* ‘but’; Old Church Slavic *a* ‘but, and’; Lithuanian *o* ‘but’. According to Mann (1984—1987:1), these are to be derived from Proto-Indo-European *\*ā* ‘and, or, but’, while Puhvel (1984—.1/2:9—10) sees them as adverbial forms of the pronominal stem *\*e-/\*o-*.
4. Hurrian *guru* ‘anew, once again’: Perhaps to be compared with the Proto-Indo-European stem *\*kʷrt-* found in: Welsh *pryd* (< *\*kʷrtu-*) ‘time’; Oscan *-pert* in *petiro-pert* ‘four times’; Sanskrit *-kṛt* ‘...time(s)’ in *sa-kṛt* ‘once’.
5. Hurrian *ma* ‘and’: Note the Hittite enclitic particle *-ma* ‘however, but, and’. This particle is also found in the other Anatolian languages: Palaic *-ma* (meaning uncertain); Lydian enclitic *-m*; Lycian stressed particle *me*. This has been compared with Greek (Thessalian) *μά* = δέ ‘but’.
6. Hurrian *šummi* ‘with’: This may be compared with the Proto-Indo-European stem *\*sem-/\*sm-* ‘together with’, found, for example, in Sanskrit in its reduced form *sa-* (< *\*sm-*) in *sa-kṛt* ‘once’ cited above (full-grade *sám* ‘with, along with, together with, together, altogether’) and in Latin in *sem-per* ‘always’ (for more, cf. Pokorny 1959:902—905). This stem also provides the basis for the Greek, Armenian, and Tocharian numeral ‘1’ (Greek *εἷς* [< *\*sems*], *σμία*; Armenian *mi*; Tocharian A *sas*, B *se*).
7. Hurrian *undu* ‘then, when’: Compare Proto-Indo-European *\*H<sub>1</sub>endh-/\*H<sub>1</sub>ndh-* ‘here, there; thereupon, then; when’ in: Armenian *and* ‘there, yonder’; Greek *ἐνθε* ‘here and there, hither and thither; thereupon, then, just then; where, whither; when’, *ἐνθεν* ‘thence; thereupon,

thereafter; whence'; Latin *inde* 'thence, from there; then, thereupon; from that time forth', *unde* 'whence, from which, from where'.

# 6

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## Verbal Morphology

### Hurrian Verb Morphology

Hurrian verb morphology is extremely complicated. As in nominal forms, the root comes first, but, unlike the noun, it is not followed by a stem vowel (“thematic vowel”). The root is followed by derivational suffixes, followed by aspectual/temporal forms, followed by valency markers (class markers), negative markers, and person and mood markers. Hurrian verbs clearly distinguish transitive and intransitive (cf. Bush 1964:177—178). Though most verbs are either exclusively transitive or intransitive, some can be used as both, for example: *un-* ‘(intr.) to come; (tr.) to bring’; *nahh-* ‘(intr.) to sit down; (tr.) to set, to put, to place’; *an-* ‘(intr.) to be pleased; (tr.) to please’.<sup>84</sup> The endings of transitive verbs agree with the person and number of their subject, but this is not the case with intransitive verbs. The direct object and the subject of intransitive verbs, when they are not represented by an independent noun, are indicated by clitics and pronouns.

One of the notable characteristics of Hurrian verb morphology is “valency”. Valency refers to the number of noun phrases governed by the verb. The valency of a verb can be modified either by changing the valency marker or by using a suffix that indicates intransitive. According to Speiser (1941:85), Hurrian distinguished between three valency markers (Wilhelm and Bush call them “class markers”; Diakonoff [1957:5], on the other hand, calls them “indicators of transitiveness and intransitiveness”):

- (1) *-a-*: one valency, intransitive, apparently only with verbs of motion;
- (2) *-i-*: two valencies, transitive used in the active voice; and
- (3) *-u-*: two valencies, transitive used in the passive voice.<sup>85</sup>

Hurrian person names can exemplify this system. The valency marker is followed by the (obsolescent) Hurrian pronoun *\*-b* representing ‘P3 sg. + past tense’,<sup>86</sup> often written with <-m>, or the more recent *-s*. The three valency markers function as follows:

- *Unab-šenni* ‘a brother came’ (intransitive)
- *Tadu-Heba* (fem.) ‘Hebat is loved’ (transitive in the passive voice)

<sup>84</sup> Examples from Wilhelm (2004a:110).

<sup>85</sup> Wilhelm’s (2004a:111) approach does not seem to fit the pattern of person names.

<sup>86</sup> It can be noted that *-b* seems to be missing, especially in *feminine* person names. Speiser (1941:139) nevertheless rejects the idea that this may have a connection with grammatical gender.

- *Tadib-Tilla* ‘the god Tilla loved (him/her)’ (transitive in the active voice)
- *Teħub-šenni* ‘a brother has been added’
- *Iħib-Nuzu* ‘Nuzu has increased (him, her, it)’
- *Hašu-keldi* ‘good health has been heard’<sup>87</sup>
- *Hašib-enni* ‘the god heard (him/her)’

Other examples are:

- *Unab-Teħsub* ‘Teħsub came’
- *Arum-Atal* ‘a strong (one) has been given’
- *Kelum-allai* ‘a lady has been satisfied’
- *Kelu-Heba* (fem.) ‘Heba has been satisfied’
- *Mušum-atal* ‘a strong (one) was created’
- *Puhu-Menni* (fem.) ‘Menni exchanged (her)’
- *Šarum-elli* ‘a sister was desired’
- *Talbuš-attili* ‘the father has become greater’
- *Talbun-naya* ‘the harvest (?) has become greater’
- *Agib-Teħsub* ‘Teħsub raised (him/her)’
- *Agib-šenni* ‘The brother raised (him/her)’
- <sup>m</sup>*Arib-Ibla* ‘Ebla gave (him/her)’
- *Eħli-Teħsub* ‘Teħsub saved (him/her)’
- *Haib-šarri* ‘a king took (him/her)’
- *Hudib-Teħsub* ‘Teħsub praised (him/her)’
- *Ki-ik-li-pa-ta-al-li-n* \*ki(l)kl-i-b-atal-ni ‘The strong (one) has raised (him/her)’
- *Kirib-Tilla* ‘the god Tilla freed (him/her)’
- *Pašib-Tilla* ‘Tilla sent (him/her)’
- <sup>m</sup>*Paib-Ibla* ‘Ebla built (it)’
- *Zilib-Tilla* ‘Tilla has witnessed (him/her)’

This system of valency markers is coherent with Hurrian being an Accusative language. The flexibility in the use of case markers in nouns is partly explained by the fact the verb system already makes it clear what the syntactical structure of the sentences are. It can also be noted that, in these person names, which are in fact clauses, the verb comes before the subject.

Another point about these person names is the difference between *-b* and *-m*. In the person names, they probably are graphic variants, as noted by Speiser (1941:140): “The variation is a phonologic<sup>88</sup> one and thus the alleged independent *-m* is eliminated.” This conclusion goes too far, and these two markers are different: *-b* is ‘P3sg. + Past’, and *-m* is ‘present participle’ as shown by this long sentence in KBo 32.14 VoIV:

<sup>87</sup> This word refutes the approach of Wilhelm, as ‘good health’ cannot be the subject. Cf. Speiser (1941:127) talking about this word: “The only solution is to regard the u-form as passive.”

<sup>88</sup> In the way, Speiser used the word “phonological”. This actually means “phonologically irrelevant and of purely graphic nature”.

- < 9. šu-ul-lu-ú-ub-ri e-er-bi-né-eš e-ep-he-e-ni >
- < 10. ta-la-ah-hu-u-um \* ta-la-ah-hu-u-um e-ep-he-e-ni >
- < 11. ha-a-šar-ri pu-ú-si-hu-um \* pu-ú-si-hu-um >
- < 12. ha-a-šar-ri na-ah-ha-ab ú-la-nu-u-um >

‘9. A *šullūubri* (bread) the dog in the oven, 10. drawing \* drawing in the oven, 11. in the oil dipping \* dipping, 12. in the oil lied down having a meal.’

There is only one subject: *erbi-ni-š* ‘the dog (Erg.)’ and one finite verbal form: *nahhab* ‘he lied down’. The other verbal forms with *-m* ending are participles. It can also be noted that several words in the Absolutive case are used with an unmarked Locative meaning. And this section is also written in dactylic hexameters as the previous one.

According to Wilhelm (2004a:111) and Bush (1964:187—193), Hurrian distinguished tense differences by means of the following suffixes:

- a) Present tense: *-Ø*;
- b) Past tense: *-oš-* \*[-os-] in Wilhelm's reconstruction of Hurrian;
- c) Future: *-ett-* \*[-et-] in Wilhelm's reconstruction of Hurrian.

(According to Diakonoff—Starostin [1986:89—90], there is some indication that these suffixes may have once been aspect markers.)

This approach does not seem to be correct on several counts. It seems that the past tense maker is only *-š-* \*[s] without the vowel. What Wilhelm reconstructs as a vowel *\*o* is nothing but the valency marker *\*-u-*, something that amply testifies to the untenability of this vowel system with *\*o* and *\*e*. The other valency marker *-i-* is shown in several person names, which Wilhelm (1996:176) considers obscure formations. We propose to interpret them as follows:

- *Aniš-hurbe* ‘The rhyton made (him/her) happy’
- *Haiš-Teššub* ‘Teššub took (him/her)’ (cf. *Haib-Teššub*)
- *Paiš-Kumme* ‘Kumme built (it)’
- *Tehiš-menni* ‘Menni made (him/her) greater’
- *Šeriš-adal* <*še-ri-ša-ta-al*><sup>89</sup> ‘The strong (one) pleased (him, her)’

The verb ending *-iš* seems to be a more recent development than the obsolescent Old Hurrian ending *-ib*.

The tense marker of the future does not seem to be correct either. The marker is actually *-ed-* \*[-(y)i:d]. The dental *-tt-* exists only as the marker of the third person plural. It can be noted that the future has grammatical affinities with the conditional, as shown by KBo 32.15 Ro I 8'—9', which connects:

- <(...) ú-e-et-ta d Te-š-šu-ub>
- <ga-ap-pí-li-wa-aš pa-ri-is-sà-te u-bi >
- ‘8'. Will Teššub be hungry, 9'. we would give half a kor of barley’

<sup>89</sup> This word is the origin of the non-existing equative case marker *-š* in Speiser (1941:204).

The conditional is called *cohortative* in Catsanicos (1996:215). This term is actually taken from Speiser. This mood is also called *desiderative*.

The personal morphemes for the *1st person singular* are:

- Present:    \*[(una)-at(t)a] <ú-na-at-ta> 'I come' (intr.) ChS I/5 Nr.64 Rs. IV 3  
\*[(tad)-aw] <ta-a-ta-ú> 'I love (him)' (tr.) Mit. I 75  
\*[(pala)-aw] <pa-la-a-ú> 'I know (it)' (tr.) Mit. III 91, 93  
\*[(tan)-aw] <ta-a-na-ú> 'I do (it)' (tr.) Mit. II 92
- Past:       \*[(aru)-u-š-aw] <a-ru-u-ša-ú> 'I gave (it)' (tr.) Mit. III 11  
\*[(tan)-u-š-aw] <ta-a-nu-ša-a-u(...)> 'I did (it/them)' (tr.) Mit. I 73  
(neg.) \*[(kudzu)-u-š-iw-awə-la-(...)] <ku-zu-u-ši-wə-wə-la-(...)> 'I did not keep them back' Mit. IV 46
- Future:      \*[(ar)-i(:d)-aw] <a-re-da-ú> 'I will give (it)' (tr.)  
\*[(ser)-id-aw] <se-ri-tab> 'I will make (Ebla) equal to' (tr.) KBo 32.19 Ro I 25
- Optative:     \*[(xaz)-i-il-i] <ha-ši-i-i-li> 'may I hear !' Mit. IV 43  
\*[(talmast)-i-il-i] <ta-al-ma-aš-ti-i-li> 'may I magnify!' KBo 32.11 I 2
- Cond. Pr.      \*[(un)-i-wa-tta] <ú-ni-wa-at-ta> 'I would come' (intr.) KBo 32.19 I 23

The personal morphemes for the *2nd person singular* are:

- Present:    \*[(ur)-i-b] <ú-ri-u> 'you (sg) desire' (tr.) KBo 32:15 IV 2
- Past:
- Future:
- Imperative    \*[(ar)-i] <a-ri/e> 'give !' Mit. I 51  
\*[(nak)-i] <na-ak-ki> 'make free !' KBo 32:19 I 1,3
- Optative:    \*[(xazaz)-il-ab] <ha-ša-si-lab> 'may you hear !' KBo 32.15 Vo IV 13

The personal morphemes for the *3rd person singular* are:

- Present:    \*[(un)-a] <ú-ú-na> 'he/she comes' (intr.) Mit. II 14  
\*[(tad)-i-a] <ta-a-ti-a> 'he/she loves (him/her)' (tr.) Mit. I 74  
\*[(ur-i)-a-] <ú-ú-ri-a-(...)> 'he desires (them)' (tr.) Mit. I 108
- Past:       \*[(ar)-u-š-a] <ar-u-š-a> 'He/she gave'  
\*[(nax)-a-b] <na-ah-ḥa-ab> = Hitt. <e-sša-at> 'he sat down' KBo 32.13 Ro I 4  
\*[(nax)-u-s-u] <na-ah-ḥu-šu> = Hitt. <a-ša-aš-ta> 'she placed' (tr.)  
\*[(xaban)-ab] <ha-pa-na-ab> 'he/she went away'  
\*[(kilan)-ab] <ki-la-a-na-ab> 'he got raised'  
(arch.) \*[(tan)-t-ib] <da-a-an-ti-ib> 'she did' KBo 32.13 Ro I 12
- Future:      \*[(gul)-i-id-a] <guli-e-ta> 'He/she will speak' (tr.) Mit. IV 27  
\*[(ar)-i-id-a] <a-ri-e-et-ta> 'He/she will give (tr.) Mit. I 106
- Optative      \*[(xaz)-i-(j)in] <ha-ši-en> 'May he/she hear' (tr.) Mit. II 13

- \*[(am)-il-anni] <a-me-la-a-an-ni> 'May (the fire) burn (it)' (tr) KBo 32.14  
Ro I 6
- Cond. Pr. \*[(tsiku:)-ul-l-i] <sí-ik-ku-ú-ul-li> '(the hand) would get broken' KBo 32.14  
Ro I 48
- Cond. Past \*[(kadi)-li-i-wa] <ka-ti-li-e-wa> 'He could have said' (tr.) Mit. IV 18

The personal morphemes for the *1st person plural* are:

- Present: \*[(arul)-aw-ž(a)] <a-ru-la-a-uš> 'we give (it)' (tr.) Boğ-Bil.  
(neg.) \*[(nak)-i-uww-už(a)] <na-ak-ki-u-úb-wu-uš> (tr.) 'we do not make  
(him/her) free' Boğ-Bil. KBo 32: 15 I 24'
- Past:
- Future: \*[(nak)-id-aw-ž(a)] <na-ak-ki-da-a-u-uš> 'we will free (him/her)' (tr.)
- Optative \*[(tad-ugar)-i-ž] <ta-a-du-ka-a-ri-iš> 'May we love each other !' Mit. IV  
121
- Cond. Pr. \*[(kap)-il-iwaž] <ga-ap-pí-li-wa-aš> 'we want to give (him)' KBo 32.15 Ro  
I 9'

The personal morphemes for the *2nd person plural* are:

- Present:  
(neg.) \*[(nak)-i-u-šu] <na-ak-ki-u-uš-šu> 'you do not make (him/her) free'  
(tr.) Boğ-Bil. KBo 32: 19 I 20
- Past:
- Future: \*[(bur)-id-ašu] <wu-ri-ta-áš-šu> 'you will see (it)' (tr.) Qatna  
\*[(nak)-id-ašu] <na-ak-ki-da-aš-šu> 'you will free (him/her)' (tr.)

The personal morphemes for the *3rd person plural* are:

- Present: \*[(una)-alla] <ú-ú-na-a-al-la-(...)> 'They come' (intr.) Mit. I 115  
\*[(un)-ukk-allá] <ú-ú-nu-uk-ka-la-(...)> 'They do not come' (intr.) Mit. IV 3  
\*[(xu-i-)-du] <hu-u-i-tu> 'They call (him/her)' (tr.) KUB 47:2 IV 8'
- Past: \*[(muz)-ib] <mu-ú-ši-ib> 'They placed (them)' (tr.) KBo 32:13 Ro I 21  
\*[(un)-ib] <ú-ni-ib> 'They brought (them)' (tr.) KBo 32:13 Ro I 23
- Future: \*[(kuli)-i:d-ta] <guli-e-et-ta> 'they will say' (tr.) Mit. IV 60  
(Old Hurrian) \*[(ag)-ittu] <a-ki-tu> 'they will lead' KBo 32:20 I 16  
\*[(uni)-id-ta] <ú-ni-et-ta> 'they will bring (it)' (tr.) Mit. III 12, 21  
(neg.) \*[(nak)-i-ttu-uw-in] <na-ak-ki-du-u-we-en> 'they will not send (it)'  
Mit. II 52
- Optative [(tsamalaš)-duš] <sà-am-ma-la-aš-du-uš> 'May they be torn apart' (intr.)  
KBo 32.14 Ro I 57

The different personal endings for verbs are as follows:

	Intr. Present	Tr. Present	tr. + anaphoric	Past
P1 sg.	-tta	-aw	-aw-(u)nna	-š-aw
P2 sg.	-mma	-b		
P3 sg.	-a	-a	-a-nna	-š-a / (arch.) -b
P1 pl.	-tilla	-awž(a)		
P2 pl.	-abba	-aššu / -uššu		
P3 pl.	-lla	-tu -ta		

Examples of transitive pronouns further suffixed by anaphorics are:

- KBo 32.15 Vo IV 15 <i-ša-aš a-ru-u-la-ú-un-na> ‘I bring it myself’
- KBo 32.13 Ro I 1-2 <<sup>d</sup>IM-ub wa-ri-ša-nna<sup>90</sup> <sup>d</sup>A-al-la-ni-wa še-eh-lu : ḥa-i-kal-li> ‘Teššub made him(self ?) go and he entered (into) the palace (reserved) for Allani’

When it comes to comparing Hurrian and Proto-Indo-European verb suffixes, the following paragraph by Speiser (1941:202) is worth reading:

Hurrian divides its verbs into two sharply differentiated classes. This dichotomy is signalized by the class-markers: *-i*- with transitives and *-u/o*- with intransitives. It is expressed also relationally by far-reaching differences in construction. Thus the intransitives cannot take on agent-suffixes. Whereas the *i*-class is capable of referring to person by means of these morphologic elements (e.g. *-ya* in 3 p. present), the *u/o*- class is always construed impersonnally; its *-a* yields a participial form which requires the support of associative pronouns or a noun in the subject-case to constitute a specific predicate. There is nothing in common, therefore, between the “paradigm” of a finite transitive verb and of an intransitive, no matter what the tense. Nor do the tense-markers of finite transitives correspond with those of the intransitives.

### Hurrian Personal Endings and Indo-European Parallels

There are important parallels between the Hurrian personal endings given in the above table and Indo-European (the Hurrian material is cited in the form given in Friedrich 1969a):

1. Hurrian 1st person singular *-au* (< \*-a+w>): In the historically-attested Indo-European daughter languages, the 1st persons singular, dual, and plural are characterized by two sets of endings. First, there are the *\*m*-endings. These form the 1st persons singular and plural primary and secondary endings found in all of the daughter languages. Next, there are the *\*w/u*-endings. These are found in the 1st person dual in the non-Anatolian daughter languages (there is no dual in Hittite and the other Anatolian daughter languages), in several perfect forms in Sanskrit, Latin, etc., in the Luwian 1st person singular indicative ending *-wi*, in the Hittite 1st person plural endings *-wen(i)/-wani*, and, at least according to Benveniste, the Hittite 1st singular secondary ending *-u-n*. It is the Proto-Indo-European *\*w/u*-endings that are to be compared with Hurrian.

<sup>90</sup> Catsanicos (1996:224) develops this idea that *wariša* is intransitive and that *-nna* refers to Teššub. There is a morphological problem with this approach. The Hittite is <<sup>d</sup>IM-aš ma-ah-ha-an i-ya-at-ta-at na-aš-kán>.

2. The Hurrian 2nd person singular/plural endings are derived from the 2nd person personal pronoun stem *we-* ‘you’ discussed above.
3. Hurrian 3rd person singular/plural *-a* < \*-e (Friedrich 1969a:17 gives -(i)a): For Pre-Indo-European, Lehmann (2002:170—171) reconstructs two sets of verb endings that distinguish the active conjugation from the stative conjugation:

	Active	Stative
1st person sg.	*-m	*-H <sub>2</sub> e (Lehmann writes *-χ-e)
2nd person sg.	*-s	*-tH <sub>2</sub> e (Lehmann writes *-tχe)
3rd person sg.	*-t	*-e
3rd person pl.	*-nt	*-r

Note the stative (the “perfect” of traditional Indo-European) 3rd person singular ending \*-e. It is this form that is to be compared with the Hurrian ending.

4. Note once again the Hurrian plural marker *-(a)š*. This, too, has a parallel in Proto-Indo-European verb morphology; compare the Sanskrit dual and plural personal endings ending in *-s* (cf. Burrow 1973:306—307): 1st person dual active primary *-vas*, 2nd person dual active primary *-thas*, 3rd person dual active primary *-tas*; 1st person plural active primary *-mas(i)* (Latin *-mus*; Greek *-μες*): *bhárāmas* (Vedic also *bhárāmasi*) ‘we bear’ (Latin *ferimus*; Greek [Doric] φέρομες), *smás* (Vedic also *smási*) ‘we are’ (Latin *sumus*), *imás* ‘we go’ (Greek [Doric] ἴμες; Latin *īmus*). This *-s* is also found in the 2nd plural present indicative active ending *-tis* (< \*-te-s) in Latin: *ītis* ‘you go’, *datis* ‘you give’, *vultis* ‘you want’, *estis* ‘you are’, *portātis* ‘you carry’, etc. Likewise, Gothic 1st dual present indicative *bairōs* (< \*bher-ō-wes [cf. Sanskrit *bhárāvas*]) ‘the two of us carry’, 2nd dual present indicative *bairats* (< \*bher-e-t(h)es [cf. Sanskrit *bhárathas*]) ‘the two of you carry’.

### Non-finite Hurrian Verb Suffixes and Indo-European Parallels

Apart from finite verbal forms, Hurrian has a certain number of non-finite formations which have clear Indo-European parallels. They are equivalent to participles, and they have the lexical fluidity of participles: they can be either used as nouns, adjectives, gerunds, or be the predicate in equative-stative sentences.

1. The first one is a present participle *-m-*, which expresses simultaneous action and can be further suffixed with *-ae* in circumstantial use:
  - a) *alila-* ‘to cry (out), to whine’, hence <a-li-la-nu-um> ‘whining’ KBo 32.15 Vo IV 9
  - b) *kunzi-* ‘to kneel’,<sup>91</sup> hence <ku-un-zi-ma-i> ‘(while) kneeling’ KBo 32. 15 Vo IV 13
  - c) *haž-* ‘to hear’, hence <ha-ši-im-ma> ‘(on) hearing (it)’ KBo 32.15 Vo IV 8

<sup>91</sup> Note that this verb has the transitive valency probably because it means ‘to bend (the knees)’.

This formation can be compared with the suffix *-mmi-* used to create verbal adjectives from active-transitive verbs in Luwian within Indo-European: *ayammi-* ‘done’ (*aya-* ‘to do’), *\*piyami-* ‘given’ (*piya-* ‘to give’), *kišammi-* ‘combed’ (*kiša(i)-* ‘to comb’), *dupaimmi-* ‘struck’ (*dupa(i)-* ‘to strike’). Note also the suffix *\*-mo-*, which is used to create participles in Balto-Slavic and Oscan-Umbrian. Finally, there are the extended suffixes *\*-mno-/\*-mnā-* and *\*-meno-/\*-menā-*, *\*-meno-/\*-menā-*, which are used to create middle (passive) participles from tense stems ending in the thematic vowel *\*-e/o-*.

2. Another one is a past participle *-iri-*, which expresses completed transitive action:

- a) *pa-* ‘to build’, hence *pairi* ‘(who has) built’ KBo 32.14 Vo 37
- b) *siyal-* ‘to place, to put’, hence *siyaliri* ‘(who has) placed, put’ KBo 32.14 Vo 58
- c) *tab-* ‘to melt (metal)’, hence *tabiri* ‘(who has) melted (metal)’

It can be noted that this formation is frequently nominalized: *tabiri* ‘(who has) melted (metal)’ functioning as a participle is the same form as *tabiri* ‘smith’ functioning as a noun. The following comparison with Latin sheds light on the origin of the *-r* stative ending:

Hurrian	Latin	
<i>tab-iri</i>	<i>fab-er, -i</i>	‘metal-worker’ (noun)
<i>tabir-ae</i>	<i>fabr-ē</i>	‘with the skill of a metal-worker’
<i>tabi-ri-lla</i>	<i>illi fabrī-re</i>	‘they are those who worked metal’

The Latin “perfect” *illi fabrī-re* is originally an equative sentence: ‘They are those who worked metal’, hence, with a reinterpretation as a tense, ‘They wrought metal’.

3. A third formation is a past passive participle, which can be built with *-iya* or *-adu*, *-adi*. There is no clear difference between these two suffixes. The comparison with Proto-Indo-European suggests that *-adu*, *-adi* should have been used with intransitive verbs originally, but this is no longer apparent in historical Hurrian:

- a) *pa-* ‘to build’, hence *pailiya* ‘(which has been) built’
- b) *tab-* ‘to melt (metal)’, hence *tabiliya* ‘melted, molten (metal)’
- c) *hinz-* ‘to be constrained’, hence *hinzadu* ‘(being) oppressed, constrained’
- d) *nahhi-* ‘to place’, hence *nahhi-b-adi* ‘uninhabited’ < ‘[where nothing] has been placed’  
KBo 32.19 I 25 = Hitt. <dan-na-ad-du-uš>

The suffix *-adu*, *-adi* may be compared with the Proto-Indo-European suffix *\*-to-*, which was used to create passive participles (functionally, verbal adjectives): *\*klū-tó-s* ‘heard’ (cf. *\*\*klew-* ‘to hear’): Greek *κλύ-τός* ‘heard of; famous, renowned, glorious’; Sanskrit

*śru-tá-h* ‘heard; known, famous, celebrated’; Latin *in-clu-tu-s* ‘celebrated, famous, renowned’.

4. Another formation called “Essive” is a kind of adverbial use of a verbal stem:
  - a) *hinz-* ‘to be constrained’, hence *hinza* (Essive) ‘broke, without money’
5. Another formation which seems to be the intransitive equivalent of *-iri-* is formed with the suffix *-u* and expresses completed intransitive action:
  - a) *sehl-* ‘to enter’, hence <še-eh-lu> ‘having entered’ in KBo 32.13 Ro I 1—2 <<sup>d</sup>IM-ub wa-ri-ša-an-na <sup>d</sup>A-al-la-ni-wa še-eh-lu : ha-i-kal-li> ‘Teššub goes on the road; entered the palace (reserved) for Allani’.
  - b) other examples are <šu-úr-ru-ú> ‘having moved’ and <pa-a-ru> ‘being hurt’.

This formation seems to be fairly archaic in Hurrian.

Miscellaneous other formations include a causative and a nominalizing morpheme:

1. The causative is formed with *-th-* (passive causative) and *-šh-* (active causative):
  - a) *pašši-* ‘to send’ hence
    - *pašši-thi* ‘envoy’ < ‘who has been sent’
    - *pašši-šhi* ‘sender’ < ‘who has sent’

The active causative ending *-šh-* can be compared with the causative ending *\*-se/o-* preserved only as such in Tocharian. In Tocharian, *\*-se/o-* merged with the iterative-intensive suffix *\*-ske/o-*, which then also assumed a causative meaning.

2. Another morpheme is the nominalizing *-š-*:
  - a) *tadi-* ‘to love’, *tadiya* ‘He/she loves him/her’, <ta-a-ti-ya-aš-ši> ‘who loves him/her’

This morpheme can be compared with the infinitive formation *\*-esen* found on thematic stems in Greek (> Attic-Ionic *-ειν*), or *-ere* (< *\*-esi*) in Latin. For athematic stems, Attic-Ionic has *-vai*, *-evai*, which may represent earlier *\*-snai*, *\*-esnai*, respectively.

## Hurrian Verb Suffixes and Indo-European Parallels

1. *-ar-* iterative: *šiti-* ‘to curse’ > *šitar-* ‘to curse repeatedly, several times’.
2. *-ank-* meaning unclear: *pud-* / *pudank-* ‘to announce, to denounce’.
3. *-ill-* inchoactive: *šiti-* ‘to curse’ > *šitarilli-* ‘to begin to curse repeatedly’.
4. *-ul-* medio-passive: *ehepši-* ‘to contract (a muscle)’ > *ehepšuli-* ‘to get contracted’.

5. *-umme* (< \*-umne ?) infinitive: *tadukar-umme* ‘to love’, *ehl-umme* ‘to save’. Compare the Proto-Indo-European suffix \*-men-/\*-mn-. In Sanskrit, a small number of Dative infinitives are formed with this suffix (cf. Burrow 1973:131): *trā-mane* ‘to protect’, *dā-mane* ‘to give’, *dár-mane* ‘to support’, *bhár-mane* ‘to maintain’, *vid-máne* ‘to know’. Infinitives can also be formed with this suffix in Greek: ἴμεν, ἴμεναι ‘to go’, δόμεν, δόμεναι ‘to give’, ἔδμεναι ‘to eat’, etc. It should be noted that the -ai is most likely a special Greek embellishment and is not to be compared with Sanskrit *-e* (cf. Sihler 1995:609).
6. *-š-, -išt-* intensive: *pisu-* ‘to rejoice’ > *pisantišt-* ‘to be extremely happy’; *matu-* ‘to be wise’ > *mataštu-* ‘to be extremely wise’. This suffix was discussed above.
7. *-ma* negative suffix: Compare the Proto-Indo-European prohibitive/negative particle \*mē ‘do not; no, not’, found in: Sanskrit *má* ‘do not; not, that not, lest, would that not’; Greek μή ‘do not; no, not’; Armenian *mi* ‘do not’; Tocharian A (prohibitive and negative particle) *mā* ‘not, no’, (prohibitive particle) *mar* ‘do not’, also used as a negative prefix as the equivalent of English ‘un-’.
8. *-na-/nu-* causative: *kila-/kili-* ‘to rise, to raise’ > *kilina-* ‘to cause to raise, to lift’. This may be compared with the Proto-Indo-European verbal suffixes \*-no- and \*-nu-. The latter is particularly productive. It is worth noting that, in Greek and Hittite, stems in \*-nu- have a causative sense: Hittite *ar-nu-uz-zi* (< \*r-new-/\*r-nu-) ‘to move along, to make go; to stir, to raise; to transport, to deport, to remove; to bring, to transmit, to deliver, to produce; to further, to promote’; Greek ὅρνυμι ‘to set on, to urge on, to incite; to make to arise, to awaken, to call forth’. \*-no- is found, for example, in: Sanskrit *vé-na-ti* ‘to care or long for, to yearn for’; Avestan (pret. middle 3rd sg.) *-stərə-na-tā* ‘to stretch, to spread, to extend’; Latin *sternō* ‘to stretch out, to spread out’.
9. *-gar-* dual: *tad-* ‘to love’ > *tad-ugār-* ‘to love each other’, *puhugari* ‘to exchange’, <*aš-du-ka-a-ri*> ‘alliance through marriage’.

## General Characteristics of Proto-Indo-European Verb Morphology

As with nominal stems, an important distinction was made in Proto-Indo-European between thematic and athematic verbal stems. Personal endings were added directly to the verbal stem in the case of athematic stems, while the thematic vowel \*-o/e- was inserted between the stem and the personal endings in the case of thematic stems: cf. athematic (3rd sg. present active) \*gʷhén-ti ‘he/she slays’ vs. thematic (3rd sg. present active) \*bʰér-e-ti ‘he/she bears, carries’. Most scholars consider the thematic stems to be later formations.

Proto-Indo-European distinguished three persons. These were distinguished by special sets of personal endings. The personal endings will be discussed below.

Again, as with the noun, there were three numbers in the verb, at least for the latest period of the Indo-European parent language just prior to the emergence of the non-Anatolian daughter languages: singular, dual, and plural. All three numbers were preserved in the verbal systems of Sanskrit, Avestan, Gothic, Older Runic, Old Church Slavic, Lithuanian, and certain Ancient Greek dialects. There was no separate dual in the Anatolian languages.

Tense marks the time at which an action takes place. The following tenses are assumed to have existed in later Proto-Indo-European:

1. Present: occurring in the present;
2. Imperfect: occurring at some unspecified point in the past;
3. Aorist: occurring once and completed in the past;
4. Perfect (now more commonly called “stative”): referring to a state in present time (at a later date, the perfect developed into a resultative, and then into a simple preterite in individual daughter languages).

There may have also been:

5. Pluperfect: referring to a state existing in the past;
6. Future: referring to an action or an event that will occur at some unspecified point in the future.

Later Proto-Indo-European had four moods, which were used to express the speaker’s attitude toward the action:

1. Indicative: used to express something that the speaker believes is true;
2. Subjunctive: used to express uncertainty, doubt, or vagueness on the part of the speaker;
3. Optative: used by the speaker to express wishes or hopes;
4. Imperative: used by the speaker to express commands.

Beekes (1995:225) also adds an injunctive mood to the above. However, Szemerényi (1996:263—264) maintains that the injunctive was not an independent modal category in Proto-Indo-European.

There was also the category of voice, which was used to express the role that the subject played in the action. There were two voices in Proto-Indo-European:

1. Active: the subject is performing the action but is not being acted upon;
2. Middle (also called “mediopassive”): the subject is being acted upon: either the subject is performing the action on or for himself/herself, or the subject is the recipient but not the agent of the action.

The agent is the entity responsible for a particular action or the entity perceived to be the cause of an action, while the patient is the recipient, goal, or beneficiary of a particular action.

While tense marks the time at which an action takes place, aspect refers to the duration or type of a temporal activity. Though tense and aspect are closely related, they must ultimately be carefully distinguished. Aspect can indicate an action that is done once at a single point in time (punctual aspect), an action that lasts for a certain length of time (durative aspect), an action that is repeated over and over again (iterative or frequentative aspect), an action that is regularly or habitually performed by someone or something (habitual aspect), an action or event that is about to begin (inceptive aspect, inchoative aspect, or ingressive aspect), an action or event that is in progress (progressive aspect), etc. A distinction can also be made between perfective aspect and

imperfective aspect — the perfective aspect lacks a reference to a particular point of time, while the imperfective aspect is a broad term that indicates the way in which the internal time structure of the action is viewed. The imperfective includes more specialized aspects such as habitual, progressive, and iterative. Though the full extent to which Proto-Indo-European employed aspect is not entirely clear, the imperfect tense also had imperfective aspect, while the aorist tense had perfective aspect.

Several other terms should be defined as well: a finite verbal form denotes an action, an event, or a state and is marked for tense, number, mood, aspect, etc. A finite verbal form can occur on its own in an independent clause. A non-finite verbal form is not marked for tense, number, mood, aspect, etc. and can only occur on its own in a dependent clause. Non-finite forms include participles, infinitives, verbal nouns, and verbal adjectives. A transitive verb takes a direct object, while an intransitive verb does not. A direct object denotes the goal, beneficiary, or recipient of the action of a transitive verb (the patient). An indirect object denotes the person or thing that is indirectly affected by the action of the verb.

We must also note the special position occupied by *\*-n-* in verbal derivation in Proto-Indo-European. Unlike other derivational elements, *\*-n-* was inserted as an infix into type II verbal stems according to the following pattern: *\*CC-n-éC-*, but only when the verbal stems ended in obstruents or laryngeals. This infix was used in active forms but not in forms that indicated a state. The nasal infix probably denoted the point from which or to which an action proceeded, so that it characterized terminative verbs (cf. Sanskrit *yu-ñ-ja-ti*, Latin *iu-n-g-it* ‘starts to put on a yoke and carries the process through’).

As noted by Szemerényi (1996:233), there were different sets of personal endings in Proto-Indo-European, each of which had a specialized function. One set of personal endings was used with the active voice and another with the middle voice and still different sets were used with the present and past within each of these voices. Different sets were also used with the perfect and with the imperative. Each person had its own special ending, as did each number. Thus, the distinctions marked by the personal endings may be summarized as follows:

1. Person: three (1st person, 2nd person, 3rd person)
2. Number: three (singular, dual, plural)
3. Voice: two (active, middle)
4. Tense: two (present, past)
5. Perfect (= stative)
6. Imperative

There was also a difference between primary and secondary endings and between thematic and athematic endings. The terms “primary” and “secondary” are misnomers — the primary endings arose from the secondary endings through the addition of a particle *\*-i* indicating ‘here and now’ to the 1st, 2nd, and 3rd persons singular and the 3rd person plural. Intraparadigmatic Ablaut and accent variations also played a role in determining the form of the personal endings.

We can now look more closely at each set of personal endings, beginning with the present/aorist endings of the active voice:

Person	Secondary endings		Primary endings	
	Athematic	Thematic	Athematic	Thematic
1st sg.	*-m	*-o-m	*-m-i	*-o-H <sub>2</sub>
2nd sg.	*-s	*-e-s	*-s-i	*-e-s-i
3rd sg.	*-t	*-e-t	*-t-i	*-e-t-i
1st dual	*-we(H <sub>1</sub> )	*-we-	*-we(s)/*-wo(s)	
2nd dual	*-tom	*-t(H)o	*-t(H)es	
3rd dual	*-teH <sub>2</sub> m		*-tes	
1st pl.	*-me	*-o-me	*-me(s)/*-mo(s)	*-o-me-
2nd pl.	*-te	*-e-te	*-te	*-e-te-
3rd pl.	*-nt/*-ent	*-o-nt	*-nt-i/*-ent-i	*-o-nt-i

Notes:

1. The 1st singular and plural may have had alternative endings in \*/w/ besides \*/m/, as indicated by the Luwian 1st singular present indicative ending *-wi* and the Hittite 1st plural present indicative primary endings *-wени/-вани*.
2. The dual endings given in the above table are extremely controversial.
3. On the basis of the Hittite and Greek evidence, it is possible that the athematic primary endings for the 1st person plural may have had the alternative forms *\*-men/\*-mon* in the Indo-European parent language. It is clear that the basic ending was *\*-me/-mo-* to which the plural markers *\*-s* or *\*-n* could be optionally added. The individual daughter languages chose one or the other of these variants. In the case of Indo-Iranian, the resulting *\*-mes/\*-mos* was further extended by *\*-i*, yielding, for example, the Vedic 1st plural primary ending *-masi*, Avestan *-mahi*, while the same thing happened in Hittite, but with the *\*-men/\*-mon* endings instead.

The primary endings were used in the present, while the secondary endings were used in the aorist. In addition, the secondary endings were used in the optative and in the imperfect. Finally, both primary and secondary endings could be used in the subjunctive. Except for the fact that they were added after the thematic vowel in thematic stems instead of directly to the undifferentiated verbal stem as in athematic stems, the endings were identical in thematic and athematic stems apart from the first person singular thematic primary ending, which was *\*-o-H<sub>2</sub>*. Thematic and athematic stems were differentiated, however, by the fact that there was an Ablaut variation along with a corresponding shift in the placement of the accent between the singular and plural in active athematic stems, while the thematic formations do not exhibit such variations between singular and plural forms.

In Indo-Iranian and Greek, there is a prefix *\*H<sub>1</sub>e-*, usually termed the “augment”, which is added to imperfect and aorist stems. The same prefix is found in Armenian, but it is only added to the aorist. There is also a trace of the augment in Phrygian (cf. *e-daes/ε-δαες* ‘[he/she] put, placed’ [= Latin *fēcit*]). The use of the augment was a later development specific to these branches and, accordingly, is not to be reconstructed for Proto-Indo-European. The augment most likely developed from a Proto-Indo-European adverb *\*H<sub>1</sub>e-* meaning ‘at that time’.

The next set of personal endings to be examined are the endings of the present/aorist system of the middle voice (only the singular and plural forms are shown in the following table):

Person	Secondary endings		Primary endings	
	Athematic	Thematic	Athematic	Thematic
1st sg.	*-H <sub>2</sub> e	*-o-H <sub>2</sub> e	*-H <sub>2</sub> e-r	*-o-H <sub>2</sub> e-r
2nd sg.	*-tH <sub>2</sub> e	*-e-tH <sub>2</sub> e	*-tH <sub>2</sub> e-r	*-e-tH <sub>2</sub> e-r
3rd sg.	*-to	*-o	*-to-r	*-o-r
1st pl.	*-medhH <sub>o</sub>	*-o-medhH <sub>o</sub>	*-medhH <sub>o</sub>	*-o-medhH <sub>o</sub>
2nd pl.	*-dhwe	*-e-dhwe	*-dhwe	*-e-dhwe
3rd pl.	*-nto, *-ro	*-o-nto, *-o-ro	*-nto-r, *-ro-r	*-o-nto-r, *-o-ro-r

Recently, there has been a shift of opinion regarding the reconstruction of the endings of the middle (mediopassive) voice. Earlier views based the reconstruction of these endings mainly on the forms found in Indo-Iranian and Greek, and it is these older reconstructions that are given, for example, in Brugmann (1904:594—596) and Szemerényi (1996:239), among others. However, the primary personal endings of the middle voice in \*-r found in Anatolian, Italic, Celtic, Tocharian, and Phrygian are now thought to represent the original patterning, while the primary personal endings of the middle voice in \*-i found in Indo-Iranian, Greek, Germanic, and Albanian are taken to be innovations (cf. Fortson 2004:86). The personal endings found in the middle voice were related to the perfect (= stative) personal endings, as is clear from the forms listed in the above table when compared with the perfect personal endings, which are given below. Clearly, the personal endings of the middle voice found in Indo-Iranian, Greek, Germanic, and Albanian are innovations. The personal endings of the middle voice found in these branches may be viewed as having been remodeled after the endings of the active voice (cf. Sihler 1995:472; Fortson 2004:85). They have, however, retained traces of the older endings (cf. Burrow 1973:315). Even in the branches that have preserved the personal endings of the middle voice in \*-r, there has been some contamination by the personal endings of the active voice as well as other innovations specific to each branch (for an excellent discussion of the development of the personal endings of the middle voice in the various Indo-European daughter languages, cf. Sihler 1995:474—480).

Now, let us take a look at the perfect (= stative) endings (in comparison with the middle endings, repeated here from the above table [cf. Fortson 2004:93]) (only the singular and plural forms are given):

Endings of the Middle Voice					
		Secondary Endings		Primary Endings	
Person	Perfect	Athematic	Thematic	Athematic	Thematic
1st sg.	*-H <sub>2</sub> e	*-H <sub>2</sub> e	*-o-H <sub>2</sub> e	*-H <sub>2</sub> e-r	*-o-H <sub>2</sub> e-r
2nd sg.	*-tH <sub>2</sub> e	*-tH <sub>2</sub> e	*-e-tH <sub>2</sub> e	*-tH <sub>2</sub> e-r	*-e-tH <sub>2</sub> e-r
3rd sg.	*-e	*-to	*-o	*-to-r	*-o-r

1st pl.	*-me-	*-medh <sub>H</sub>	*-o-medh <sub>H</sub>	*-medh <sub>H</sub>	*-o-medh <sub>H</sub>
2nd pl.	*-e	*-dhwe	*-e-dhwe	*-dhwe	*-e-dhwe
3rd pl.	*-ēr, *-ṛs	*-nto, *-ro	*-o-nto, *-o-ro	*-nto-r, *-ro-r	*-o-nto-r, *-o-ro-r

The close resemblance between the two sets of personal endings is obvious, at least in the singular. The perfect personal endings are most certainly the oldest, and the middle personal endings are later formations derived from them.

The perfect of traditional grammar is now commonly interpreted as stative. It referred to a state in present time and was restricted to verbs that were semantically appropriate. Later, it developed into a resultative and, from that, into a preterite in the individual Indo-European daughter languages. The perfect was characterized by reduplication, by a special set of personal endings, and by a change of accent and Ablaut between the singular and plural. There was no distinction between “primary” and “secondary” personal endings in the perfect.

The imperative also had a special set of personal endings. In athematic verbs, either the bare stem could be used to indicate the 2nd singular imperative or the particle \*-dhi could be added to the bare stem instead (cf. Vedic *śru-dhí* ‘listen!'; Greek *ἴθε* ‘go!'). In thematic verbs, however, the thematic vowel alone was used to indicate the 2nd singular imperative without any additional ending: Proto-Indo-European \*bhér-e ‘carry!’ (cf. Sanskrit *bhára*; Greek φέρε). In the 2nd plural imperative, for both thematic and athematic stems, the personal ending \*-te was used: Proto-Indo-European 2nd plural imperative thematic \*bhér-e-te ‘carry!’ (cf. Sanskrit *bhárata*; Greek φέρετε). There were also special 3rd singular and plural imperative endings in \*-u: 3rd singular imperative personal ending \*-tu, 3rd plural imperative personal ending \*-ntu. The \*-u imperative forms are found in Hittite as well.

The complex verb system outlined above for Proto-Indo-European was by no means ancient (cf. Lehmann 2002:169—182 for details). Indeed, the complex verb system had only just started to take shape in early post-Anatolian Proto-Indo-European, and its expansion was not fully completed by the time that the individual non-Anatolian daughter languages began to appear. It was left to the daughter languages to fill out and reshape the system.

## The Deep Foundations of Proto-Indo-European Verb Morphology

The analysis of Hittite verbal morphology has had a major impact on the verbal system traditionally reconstructed for Proto-Indo-European. Though it is now generally accepted that the Hittite verbal system cannot be derived from the verbal system traditionally reconstructed for the Indo-European parent language, the exact nature of the verbal system that needs to be reconstructed to accommodate the Hittite material is still being worked out. The most recent and most ambitious attempt to try to reconcile the Hittite material with that of the other daughter languages is Jasanoff 2003.

The only non-finite verb form that can be securely reconstructed for earlier stages of Proto-Indo-European is the participle in \*-nt- (cf. Lehmann 2002:183). In Hittite, it conveyed past meaning when added to non-stative verbs (cf. *kunant-* ‘[he] who has been killed’) but present meaning when added to stative verbs (cf. *huyant-* ‘running’) (examples from Luraghi 1997:38). This was most likely the original patterning. In post-Anatolian Proto-Indo-European,

however, its function was modified. During this stage, the suffix *\*-nt-* was used to form present and aorist participles in the active voice, which is how it is used in all of the non-Anatolian daughter languages.

One thing is made clear by Hittite and the other Anatolian Indo-European daughter languages — though thematic stems were the most common type in the older non-Anatolian dialects (Sanskrit, Greek, Latin, etc.), they were relatively late formations in the Indo-European parent language. They arose mostly in post-Anatolian Proto-Indo-European, where they gradually replaced the earlier, athematic stems (cf. Lehmann 2002:160). Thus, the athematic stems represent the most ancient layer.

Moreover, in the earliest period of development, there was no difference between primary and secondary endings. The primary endings arose later when the deictic particle *\*-i* meaning ‘here and now’ was appended to the secondary endings. Thus, it is clear that the so-called “primary endings” are really secondary, while the so-called “secondary endings” reflect the earliest forms.

Finally, as also made clear by Hittite, only two tenses were distinguished in early Proto-Indo-European: present/future and preterite (= non-present). Additional tenses developed in post-Anatolian Proto-Indo-European.

But, there is more. The evidence of Hittite (second singular preterite ending, *mi*-conjugation, *-t(a)* [cf. Luraghi 1997:34; Hoffner—Melchert 2008:181]) and Tocharian (second singular present and subjunctive endings, active voice: Tocharian A [athematic] *-(ä)t*, [thematic] *-'t*<sup>92</sup>; Tocharian B [athematic] *-(ä)t(o)*, [thematic] *-t(o)*) seems to indicate that the original form of the second person singular ending, active voice, may have been *\*-t* and not *\*-s* (cf. Villar 1991:248), though *\*-s* is ancient inasmuch as it is also found in Hittite in the second singular present/future ending, *mi*-conjugation, *-ši* (cf. Luraghi 1997:34; Hoffner—Melchert 2008:181). Reconstructing a *\*-t* in the singular would make sense in view of the plural ending *\*-te* (cf. Sihler 1995:454 and 464—465; Fortson 2004:84—85; Szemerényi 1996:235; Brugmann 1904:591—592). Next, the original form of the third person singular ending in Proto-Indo-European, active voice, may have been *\*-Ø* (cf. Villar 1991:248; Watkins 1962:90—96 and 1969:49—50), though there are strong indications that *\*-s* may have played a part here too (cf. Watkins 1962:97—106) — note the Hittite third singular preterite ending, *hi*- conjugation, *-š* (cf. Luraghi 1997:34; Hoffner—Melchert 2008:181). At a later date, *\*-t* became the primary marker of the third singular present, active voice, and was also added to the third plural present ending *\*-(e)n*, active voice, as well, producing the new ending *\*-(e)n-t*. No doubt, it was the introduction of *\*-t* into the verbal paradigm as the third person marker that brought about the need to replace the second person singular with *\*-s* (cf. Watkins 1962:105). Also, there are indications that there were alternative first person singular and plural endings in *\*-w-*. Note, for example, the Luwian first person singular primary ending *-wi*, not attested in the non-Anatolian daughter languages, which consistently have *-mi* (as does Hittite). Furthermore, note the Hittite first plural endings: (primary [present/future]) *-weni/-wani*, (secondary [preterite]) *-wen/-wan* (cf. Luraghi 1997:34—35; Hoffner—Melchert 2008:181) — in Hittite, the alternative endings (primary) *-meni/-mani*, (secondary) *-men/-man* only appear after *-u-* (cf. Hoffner—Melchert 2008:181, fn. 14). Traces of the *-w*-endings are found in the non-Anatolian daughter languages

<sup>92</sup> The *-'* indicates that the preceding consonant is palatalized.

in the first person dual endings (active voice): (primary) *\*-wos*, (secondary) *\*-wě* (cf. Sihler 1995:454; Fortson 2004:84—85; Szemerényi 1996:235; Brugmann 1904:593).

Thus, the earliest recoverable Proto-Indo-European (Lehmann's "Pre-Indo-European") active personal endings may have been as follows (cf. Villar 1991:249; Watkins 1962:105):

Person	Singular	Plural
1	<i>*-m / *-w</i>	<i>*-me / *-we</i>
2	<i>*-t</i>	<i>*-te</i>
3	<i>*-Ø, *-s</i>	<i>*-en</i>

The relationship of these endings to the personal pronouns traditionally reconstructed for Proto-Indo-European is obvious.

Active verbs were used with active nouns, while stative (= inactive) verbs were used with inactive nouns (cf. Gamkrelidze—Ivanov 1995.I:256). However, this represents only part of the picture. Gamkrelidze—Ivanov (1995.I:258) note that verbs used active endings in two-place constructions in which both nouns were active. They represent the paradigmatic conjugational model for verb forms with active arguments in a convenient chart (A = active noun; V = verb; In = inactive noun; superscripts show structural syntactic status):

	Agent	Predicate	Patient
1p.	A —	V-mi —	A <sup>In</sup>
2p.	A —	V-si —	A <sup>In</sup>
3p.	A —	V-ti —	A <sup>In</sup>
	Person	kills	animal

They also note that there must have also been two-place constructions in which the first noun was active and the second inactive, such as in the phrase "person moves stone". In an active language, this construction would be marked by a different verb structure than that with two active nouns. In this case, the inactive (= stative) endings would be used. Gamkrelidze—Ivanov represent this type of construction as follows:

	Agent	Predicate	Patient
1p.	A —	V-H <sub>2</sub> a —	In
2p.	A —	V-tH <sub>2</sub> a —	In
3p.	A —	V-e —	In
	Person	moves	stone

The "perfect" stems of traditional grammar were characterized by another set of personal endings. The first and second person plural endings were lacking. At a later date, the endings for these persons were borrowed from the active conjugation (cf. Lehmann 2002:171; Clackson 2007:128). The "perfect" verb endings were as follows (cf. Lehmann 2002:171):

Person	Singular	Plural
1	*-H <sub>2</sub> e	
2	*-tH <sub>2</sub> e	
3	*-e	*-er

Unlike the active verbs, which were accented on the stem in the singular but on the ending in the plural, the stative forms were originally accented on the ending throughout the paradigm (as was the middle, which was derived from the stative). During the earliest stage of Proto-Indo-European, the stem was in zero-grade in stative verbs, in accordance with the rule that only one full-grade vowel could occur in any polymorphemic form. However, at a later date, the accent was shifted to the stem in the singular in imitation of the active verbs, with the result that the zero-grade was changed to full-grade. The endings remained in full-grade as well, even though they were no longer accented. The fact that the stem appeared in the *o*-grade instead of the *e*-grade indicates the secondary nature of the full-grade vowel in the singular forms. It was also during the later stage that reduplication started to be used with stative verbs. Cf. Fortson (2004:93—95), Burrow (1973:341—346), and Sihler (1995:564—572) for more information on the stative (= “perfect” of traditional grammar).

As Pre-Indo-European began changing from an active-type language to an Accusative-type language, tense was introduced — formerly, verbs were characterized by aspect rather than tense. At first, only two tenses were distinguished: present/future and preterite (= non-present). This is the situation reflected in Hittite (cf. Luraghi 1997:31; Hoffner—Melchert 2008:306). Additional tenses developed during post-Anatolian Proto-Indo-European. For details on these and other developments, cf. Lehmann (2002:167—193).

Thus, we can see that, in the earlier stages of development, Proto-Indo-European verb morphology was rather simple. There was a binary opposition between active verbs and inactive (= stative) verbs. Each had its own special set of endings. In general, active verbs were used with active nouns, and inactive verbs were used with inactive nouns. With the change of Proto-Indo-European from an active-type language to an accusative-type language, this earlier system was restructured, and new formations were created in accordance with the new structure.

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## Hurrian Vocabulary

### Hurrian Vocabulary

The lexical items listed in the Hurrian vocabulary are taken for the most part from Laroche (1980), *Glossaire de la langue hourrite*. Most of these items are considered Hurrian by Laroche, and they cannot be traced back either to a Semitic or to an Indo-European language of the Anatolian or Indo-Aryan branches. The *Glossaire* also contains words of Semitic or Sumerian origin, which have not been included here. Words with unknown meaning are not listed either. Additional items from Diakonoff (1971) are signaled with DI. Words from the Hittite-Hurrian bilingual studied in Catsanicos (1996) are signaled with CA. In some cases, meanings are not those of Catsanicos but taken from Neu (1988).

Each entry contains the following information when possible:

- a phonetic reconstruction \*[ ] ; undetermined velar fricatives are noted [H],
- Laroche's own transcriptions [EL],
- the alphabetic transcription in Ugaritic alphabet [UG],
- the meaning translated from French or German, sometimes uncertain (?).
- the Urartian cognate [UR] or the Subarean cognate,

The prosodic classes are indicated when known: [P -3] antepenultimate mobile accent, [P x-] fixed on initial, [P -x] fixed on last, [P >] mobile in oblique cases, [P -2] penultimate accent.

The words are listed according to the following order:

\*/(?)a/ \*/b/ \*/ts/ \*/d/ \*/g/ \*/γ/ \*/x/ \*/(?)i/ \*/k/ \*/l/ \*/m/ \*/n/ \*/p/ \*/r/ \*/š, ś/ \*/t/ \*/(?)u/ \*/w/ \*/ž, ž/ \*/dz/

The glottal stop is not taken into account. Words with possible lateral fricatives are not separated from simple palatal fricatives.

On the whole, most Hurrian words can be related to a “root” with a #(C)vC- shape. It can be noted that most #(C)vC- combinations permitted by the phonological system of Hurrian are attested. The phonological yield of the system is very high.

### Letter/Phoneme \*a

It is not possible to make any distinction between words where initial glottal stop may have existed and words which may have started with a vowel.

\*[Abadí] [P -x] ‘name of the goddess *Lelluri* of Manuziya (Kizzuwatna)’

EL *Abate* <a-ba-te>

\*[abantalli] [P -3] ‘anterior’

EL *awantalli*. A derivative of *abi/awi*.

\*[ábi] [P >] ‘the front part’

EL *abi* (variant *awi*) <a-(a)-bi>. See also *ayi*.

*abi-bi* (Gen) \*[abíwi] ‘first’

*abi-n* ‘before’ [+Dative]

*abi-da* ‘toward’ [+Dative]

*Teššuppa abi ~ abin Teššuppa* ‘in front of Teššub’

*abi inninaža* ‘in front of the gods’

\*[ábi] [P x-] ‘hole in the ground leading to the netherworlds’

EL *abi* <a-(a)-bi> UG [á b]. From Sumerian.

\*[abi] ‘who?’

CA <a-bé-e, a-wi>

\*[abiyarri] ‘*abiharri*, a mesure of surface: ca. 1800 m<sup>2</sup>,

CA <a-bi-har-ri>

\*[ábri] ‘stock of wood-logs’

CA <a-ab-ri>

\*[abúndi] ‘plowed field’

CA <a-bu-un-ti>

\*[atsiri] ‘prisoner of war’

CA <a-(as)-ší-i-ri>

\*[adáli] [P -2] ‘strong’

EL *adali*. Translates Akkadian *gašru* ‘strong’.

\*[adasi] ‘lower city walls’

CA <a-ta-aš-ši>. Cf. *kirhe*.

\*[adí] [P -x] ‘thus’

EL *adi* <a-ti>

\*[adirya] (Essive) ‘(being) in conflict’

CA <a-ti-ir-ḥa>

\*[admi] ‘stool’

CA <ad-mi>

\*[agabi] ‘on this side’

CA <a-ga-bé-e, a-ga-a-we>

\*[ag-ú] [P-x] ‘to bring, to lead’

EL *ag-* <a-ku-u>. Translates Hittite *šarā dā-* ‘to take up’.

UR <ag/j(u)>

\*[agul-] 'to carve'

CA <a-ku-l>. Translates Hittite *gul(aš)š-* 'to carve, to engrave'.

\*[agu?úrni] 'carving'

Ca <a-ku-ú-úr-ni>

\*[ayari] [P -3] 'incense'

EL *ah(a)ri* <aḥari> UG [á ǵ r l]

\*[ayrusxi] 'incense-burner'

EL *ahrušhi* UG [á ǵ r t h]. Instrumental derivative *-šhi-* of *aḥari*.

\*[ai] 'if, if only' [followed by a syntagm]

EL *ai* <a-a-i>

\*[Aja] 'wife of Šimegi'

EL *Aya*

\*[aji] [P >] 'face'

EL *aye*. Cf. *abi*. *Aye* is a variant form of *abi*.

\*[ak-í/ú] [P-x] 'other'

EL *a(k)ku* <ag-gu-uš>

Erg. \**akuš*; Gen. \**aku-we* <a-gu-ú-e>; Dat. \**aku-wa*; Abl. \**aku-dan*.

\*[al-] 'to bring near to' [Neu (1988)]

CA <a-le-, a-li->

\*[al-] 'to speak'

Cf. *alilan-*, *älmi*.

\*[aláli] 'a kind of clothes'

CA <a-la-a-li>

\*[Alalu] 'the God Alalu, older than Kumarbi in the Theogony'

EL *Alalu* <A-la-lu->

\*[alázi] 'if, whether'

EL *alaše* <a-la-a-ši>

\*[Alažiaya] 'Cypriot'

EL *Alašiyahi* UG [á 1 š y ǵ]

\*[äl(a)mi] [P x-] 'oath'

EL *el(a)mi* <e-la-mi>. Not attested with <#i->. Translates Akkadian *māmītu* 'oath'. Cf. *al-*.

\*[älardi] 'sisterhood'

EL *elardi*

\*[äli] [P x-] 'sister'

EL *eli* <e-e-li->. Not attested with <#i->.

\*[äli] 'feast, holy day' (?)

EL *eli*. Derivative *eli-burni*. Not attested with <#i->.

\*[alilan-] 'to shout, cry, lament'

CA <a-li-la-n->. Cf. *al-*.

\*[alipsi] 'brick'

CA <a-li-ip-ši>

\*[alla-i] [P >] 'lady, queen'

EL *Allai* <a-al-la-i> UG [á l]. With elidable *-i*.

UR <alae>  
 Derivative: *allašši* \*[allasi] ‘status of being queen’  
 \*[Allani] ‘Sun-goddess of the Earth’  
 EL *Allani*. Translated in Hittite as *taknaš* <sup>d</sup>UTU-uš.  
 \*[allanúxi] [P -2] ‘of the queen, reginal’  
 EL *allanuhhi* <al-la-an-nu-uh-hi>  
 \*[alúmi] [P -2] ‘last’  
 EL *alu(m)mi* <a-lu-u-um-me>  
 Instr. *alumai* ‘coming last, last’  
 \*[am-] ‘to burn down, to be gutted by fire’  
 \*[am-] ‘to see’, attested in the compound CA <a-mu-(u)l->  
 \*[am-] ‘to harm’,  
 CA <a-ma-r-> ‘to harm repeatedly’  
 CA <a-ma-ri-il-l-> ‘to begin to harm repeatedly’  
 \*[Amánu] [P -2] ‘the God Amon’  
 EL *Aman* <A-ma-a-nu-ú-uš>  
 \*[ámati] [P x-] ‘grand-father’  
 EL *ammati* <am-ma-ti>  
 <a-ma-at-te-na e-en-na> ‘the ancient gods’  
 \*[Amitsadu] [P x-] ‘an ancient god mentioned with Alalu’  
 EL *Amizzadu* <A-(am)-mi-iz-za>  
 \*[amm-] [P x-] ‘to arrive at, to reach’  
 EL *amm-*, CA <a-am-m->  
 \*[amumi] ‘message’  
 CA <a-mu-(u)-mi>  
 \*[amu(?)mi] ‘administrator’  
 CA <a-mu-ú-mi>  
 \*[an-] ‘to rejoice’  
 Attested in the compound CA <a-na-aš-t->.  
 \*[anami] ‘thus’  
 EL *anam(mi)*. Used in correlation with *inu(me)*.  
 \*[Anat] ‘the Canaan Goddess Anat’  
 EL *Anat* <a-na-t> UG [‘n t].  
 \*[andí] [P -x or >] ‘that’  
 EL *andi* <an-ti> (\*[andú-] in oblique cases).  
 \*[anni] [P >] ‘this’  
 EL *anni* <an-ni> UG [‘n] (\*[annú-] in oblique cases).  
 \*[andzannuy-] ‘to ask’ (?)  
 EL *anzannuh*.  
 \*[ar-] (1) ‘to give’  
 EL *ar-* <a-ri->.  
 UR <aru>  
 \*[ar-] (2) ‘to grow, increase’  
 CA <e-r>. Derivatives: <e-ra-a-n> (Causative), <e-ru-u-l-> (Medio-passive).

\*[Arandzah] 'the Tigris River'  
 EL *Aranzah* <a-ra-an-za-ah>.

\*[arbi] 'dog'  
 CA < e-er-bi>.

\*[ardi] [P > (?)] 'town'  
 EL *arde* <ar-di-na> UG [ r d].  
 UR <ardi>.

\*[arni] [P x-] 'sin, blame'  
 EL *arni*. Translates Hittite *waštul* 'injury, sin' (cf. Akkadian *arnu* 'guilt, wrongdoing').

\*[arni] 'extremity, end, top'  
 CA <a-ar-ni>

\*[arul-] 'to lead, drive'  
 CA <a-ru-(u)-l->

\*[aruzula] 'to hurry'  
 EL *arušul-* <a-ru-uš-šu-la> UG [ r ]. Translates Akkadian *hamātu* 'to hasten, to be quick'.

\*[ás-] [P x-] 'to be seated'  
 EL *ašš* <a-aš-še-š> UG [ t].  
 UR <aš>

\*[asxi] [P x-] 'skin'  
 EL *ašhe* <a-aš-hi-> [CA 'skin of an animal'].

\*[asxijasi] 'sacrificator'  
 EL *ašhiyašši*.  
 UR <ašh>

\*[asxuzikunni] 'offerer'  
 EL *ašhušikkunni* (DI *ašhožikkone*).  
 Derivative -kunni as in *ammumi-kunni* 'servant, door-keeper' (?)

\*[asxu] [P x-] 'high'  
 EL *ašhu* UG [ t h].  
 <a-aš-hu-ú-i> 'upward, high'.

\*[asi] 'grease, fat'  
 CA <a-aš-še>

\*[Astábi] 'a god of war like Ninurta'  
 EL *Aštabi* <Aš-ta-a-bi>. Cf. Akkadian *Aštūbinu*

\*[astasxi] 'womanhood'  
 EL *aštašhi* UG [ t t h]

\*[ásti] [P x-] 'woman' (Hurrian loanword in Akkadian *aštu* 'woman').  
 EL *ašte* <a-aš-ti> UG [ t t]. Diminutive *aštágā*.  
 Subarean *aštu* 'woman'

\*[astúxi] 'female, feminine'  
 EL *aštuhhi*. As opposed to *turuħħi* 'male, masculine'

\*[astutsi] 'feminine, womanly'  
 DI *aštuzzī*.

\*[áta-i] [P >] 'father'  
 EL *attai* <at-ta-y> UG [ t]. With elidable -i.

Derivatives: *attárdi* ‘fatherhood’; *attášši* ‘patrimony’

UR <ate>

\*[awalli] ‘measure of surface: ca. 3600 m<sup>2</sup> = one IKU’

CA <a-wa-al-li>

\*[awari] [P -3] ‘field, steppe’

EL *awari* <a-wa-ri> UG [á w r]

\*[azúyi] [P -2] ‘pine-tree’

EL *ašuhi* <a-šu-u-hi>. Used for making smoke.

\*[azuyi] ‘meal, eating-time’

CA <a-šu-(u)- hi>. Translates Hittite *adannaš mehur* ‘eating-time’.

\*[adzami] ‘figurine’

EL *azammi* <a-za-am-mi-na>

## Letter/Phoneme \*b

The phoneme \*/b/ is extremely elusive word-initially. The alternations in Hurrian between <b>, <w> and <p> make it possible to reconstruct \*b (probably at the Proto-Hurrian stage). In the historically attested “dialects” of Hurrian, it seems that #b- fused with either \*w or \*p, in coherence with the general absence of voiced initials in Hurrian.

\*[baban] ‘mountain’

EL *pabani* <pa-ab-ni, wa-wa-n> UG [p b n].

UR <baba>

\*[babanyi] ‘mountainous’

EL *pabanhí* <pa-ba-an-hi> UG [p b n x].

\*[bay-] ‘to destroy’

CA <pa/wa-ah->.

\*[bayri] ‘good, beautiful’

EL *wahri* <wa/pa-ah-ri>

CA <wa-ah-ru-ši> ‘excellent’.

\*[bandarini] ‘cook’

CA <pa/wa-an-ta-ri-ni>

\*[bandi] ‘right (side)’

EL *wandi* <wa/pa-andi>

<wa-an-ti-in> ‘to the right side of’

\*[barini] ‘baker’

CA <wa-ri-ni>

\*[baz-] ‘(intr.) to enter; (tr.) to bring (in)’

EL *waš-* <wa/pa-ši->

\*[bi] ‘P2 Sg., thou’

EL *we* <ú-e, we-, -be->

\*[billi] ‘canal’

CA <pi-il-la>; NEU <bé-il-li, bi-i-el-le>. Translates Hittite *amiyara-* ‘canal’, PA<sub>5</sub>. Cf. *pala* ‘canal’.

- \*[bur-] 'to see'  
EL *wur-* <wu/bu-u-r->
- \*[buru] 'strong'  
CA <pu/wu-ú-ru>
- \*[burni] 'house, temple'  
EL *pur(u)li, purni* <pu-ur-ni, wu-ur-ni>.  
UR <purule>
- \*[buruylı-] 'east or south' (?)  
EL *wuruhli* <wu/bu-ru-uh-li>
- \*[butki] 'son'  
EL *putki* <pu-ut-ki, wu-ú-ut-ki<sup>93</sup>>  
Subarean <pi-it-qu> \*[pitku ?]

### **Letter/Phoneme \*/ts/**

This phoneme is usually written #z-, -zz-, -ś- or -s-, which stand for affricates.

- \*[tsabalgı] 'fault, blame'  
EL *zabalgı* <za-bal-gi>
- \*[tsalmı] 'statue'  
EL *zalma*. From Akkadian *šalmu* 'statue'.
- \*[tsamm-] 'to rip, tear apart'  
CA <sà-am-m->. Intensive <sà-am-ma-la-aš-d->.
- \*[tsammaru] 'song'  
EL *zammaru* <za-am-ma-rù>. From Akkadian *zamāru* 'song'.
- \*[tsazul-] 'to provide with food'  
CA <sà-a-sú-(u)-l->. Intensive <sà-a-sú-(u)-lu-(u)-uš-t->.
- \*[tse-er-re-e] 'donkey'  
CA <se<sub>20</sub>-e-er-re-e>. Not attested with -i-.
- \*[tsik-] 'to break'  
CA <sí-ik-k->. Passive <sí-ik-ku-(ú)-l->.
- \*[tsillikuylı] 'witness'  
EL *zillikuhli*
- \*[tsilman-] 'to break, destroy'  
CA <sí-il<sub>5</sub>-ma-n->.
- \*[tsindzabu] 'dove' (?) [a bird dedicated to Ištar]  
EL *zinzabu* <zi-in-za-a-bu>
- \*[tsijari] 'flank, side'  
EL *ziyari* <zi-ya-ri>
- \*[tsítsi] [P x-] 'breast, nipples'  
EL *zizzi* <zi-iz-zi> <ze-(e)-zi>. From Akkadian *zīzu* 'teat'.

<sup>93</sup> There may be a contamination by Semitic *uld/walad* '(male) child'.

- \*[tsugi] 'small'  
EL *zugi* <zu-gi>  
Subarean hapax: EL *hayani* 'small'.
- \*[tsugmust-] 'to penetrate into'  
CA <sú-uk-mu-uš-t>.
- \*[tsúlu-] 'to untie, let go'  
EL *zulud* <zu-ú-lu->
- \*[tsurgi] 'blood'  
EL *zurgi* <zu-úr-ki->. Cf. *uzi* <u-zi> 'flesh'.
- \*[tsuwadati] 'a quarter of a kor'  
CA <sú-wa-ta-at-te>.
- \*[tsudzuyi] 'pitcher'  
EL *zuzuhe* <zu-zu-hé>. Variant *zizzuhi*.

### Letter/Phoneme \*d

The phoneme \*/d/ is rare word-initially. The only words attested are loanwords and this suggests that Proto-Hurrian had lost any voiced initial #\*d- > \*t.

- \*[Dadmiz] 'a Syrian god'  
EL *Dadmīš* <Ta-ad-mi-iš> UG [d d m d].
- \*[Damgina] 'spouse of Ea (of Sumerian origin)'  
EL *Damkina* <dam-ki-na-aš>
- \*[Dumudzi] 'the god Tammuz (of Sumerian origin)'  
EL *Dumuzi* <(D)u-mu-z->
- \*[Dakiti] 'the goddess Daqiti'  
EL *Daru Dakitu*. From the Semitic word *dqt* 'small'.

### Letters/Phonemes \*g and \*γ

These phonemes are not attested word-initially in coherence with the absence of voiced initials in historically attested Hurrian.

- \*[gisxi] 'throne'  
This loanword of Sumerian origin is Hurrianized with -hi: *gu.za-hi* > \*gisxi. This word seems to be adapted in Hurrian under several forms: \*[kisxi], \*[gisxi] and \*[xisxi]. Ugaritic may attest both [k h h] and [g h h] while KUB XV 34 IV 52 is <hi-iš-hi-ya>.

### Letter/Phoneme \*x <ḥ>

- \*[xá-] [P x-] 'to take; to capture (animal)'  
EL *hai-* <ḥa-a-i>  
UR <ḥa>

- \*[xabalgi] ‘iron’  
EL *habalgi* <ḥa-bal-gi>
- \*[xaban-] ‘to set moving’  
CA <ḥa-pa-a-n->
- \*[xatsitsi] ‘intelligence, wit’  
EL *hazzizzi/hasisi*. CA <ḥa-(as)-sí-(is)-sí>.
- \*[xad-] ‘to kill’  
EL *had-* <ḥa-ad->
- \*[xayıli] ‘cheek’ (?)  
EL *hahli*.
- \*[xaigalli]<sup>94</sup> ‘palace’  
CA <ḥa-(a)-kal-li>.
- \*[xalba] ‘the town Alep’  
EL *halba* <hal-pa> UG [ḥ l b]. Derivative: *halbahi*.
- \*[xaldzi] ‘district’  
EL *halzi* <ḥal-zi> CA <ḥal-zé-e>. Derivative: CA <ḥal-zu-u-uh-li> ‘district governor’.  
From Akkadian *halṣu* ‘district’, *halzuḥlu* ‘commandant of a *halṣu*’.
- \*[xalmi] ‘song’  
EL *halmi*. Translates Akkadian *zamāru* ‘song’.
- \*[xalwu] ‘fence made with stones’  
EL *halwu*.
- \*[xamadz-] ‘to oppress; to load somebody excessively’  
CA <ḥa-ma-z/s->
- \*[xan-] ‘to bear (a child), to beget’  
EL *han* <ḥa-na->. Derivative: *hanuma/i-* ‘fertile’ (?); *hani* ‘child’.
- \*[xanixi] ‘Hanean’  
EL *haniahhe* <ḥa-ni-a->. Cf. Akkadian *hanū* ‘coming from Hana, Hanean’.
- \*[xapsar-] ‘to be constantly walking’  
CA <ḥa-ap-ša-a-r->. Cf. *hapan-*.
- \*[xári] [P x-] ‘road’  
EL *hari* <ḥa-a-ri>.  
UR <hare>
- \*[xati] ‘Hatti’  
EL *hatti* <ḥa-at-ti>.
- \*[xatúyi] [P -2] ‘Hittite’  
EL *hattuhi*.
- \*[xawirni] ‘lamb’  
CA <ḥa-wi-ir-ni> = SI.LA<sub>4</sub>.
- \*[xawurni] [P -3] ‘sky’ [as opposed to *eše* ‘earth’]  
EL *hawurni* <ḥa-bur-n> UG [ḥ w r n]  
UR <qiuraanee> (?). The correspondence *ḥ* ~ *q* is very strange.

<sup>94</sup> Neu (1988) posits \**hikali*.

\*[xaz-] [P x-] '(1) to hear'

EL *haš-* UR <hašu> UG [h d].

Derivatives: *hašaš-* [P -x] Intensive (?); *hašul-* [P x-] Passive.

UR <haž>

\*[xaž-] [P x-] '(2) to oil'

CA <ha-(a)-š->.

\*[xázari] [P x-]<sup>95</sup> '(1) (fine) oil; (2) excrement'

CA <ha-(a)-ša-ri-> UG [h š r].

\*[xadzijani] 'town mayor'

CA <ha-zi-ya-ni>. From Akkadian *hazannu* 'chief magistrate of a town, mayor'.

\*[xebat] [P x-] 'the Goddess Hebat'

EL *hebat* <he-bat> UG [h b t]. Not attested with <i>.

UR <hubaa>

\*[xijari] [P x-] 'all'

EL *heyari* <he-e-ya-ar->. Plural *heyarunna* = Hittite *hūmant-* 'whole, all, every'.

\*[xijari] 'gold'<sup>96</sup>

EL *hiyari* <hi-ya-ar-ri> UG [h y r (h)]. Cannot be a loanword of Akkadian *hurāšu* 'gold'.

Derivative: CA <hé-ya-ru-uh-hi> 'made with gold'

Subarean *aarahi* 'gold'; *hiaru*, *hiarohhe* 'golden'

\*[xil-] 'to speak'

EL *hil* <hi-il-li>. Translates Akkadian *qabū* 'to say, to speak, to tell'.

CA <hé-la-a> (Essive) 'gloriously'; CA <he-e-lu-u-wa> (Dat. sg) 'for glory'.

\*[xi(:)ld-] 'high'

EL *heldi* <hi-il-da-e> UG [h l d]. Translates Akkadian *šatqū* 'raised, elevated'.

\*[ximdzatxuzi] '(extensively) girded'

CA <hi-im-za/sà-at-hu-u-ši>.

\*[xínni] 'now'

EL *henni* <hé-en-ni>

UR <hene>

\*[xindz-] '(intr.) to be constrained, to lack money; (tr.) to oppress, to constrain'

CA <hé-en-z/s->. Derivative <hé-en-za/sà-a-d->.

\*[xindzá] 'lacking money'

CA <hé-en-za/sà-a>. Also <hé-en-za/sà-du> 'oppressed, uncomfortable'.

\*[xindzidi] 'want, need'

CA <hi-in-zi/sí-ti>

\*[xerári] 'sinew, nerve'

CA <hé-(e)-ra-a-ri>. Not attested with <-i->.

\*[xíri] 'hour, time, moment'

CA <hi-i-ri>

\*[xiríti] 'trench'

CA <hi-ri-i-ti>

<sup>95</sup> There is an instance of Erg. <ha-ša-a-re-eš>, but all other instances have plene writing on the first syllable.

<sup>96</sup> Cf. Sanskrit *hiranya-m* 'gold'.

\*[xizali] 'naked'

CA <ḥé-ša-a-li>. Not attested with <-i->.

\*[xizli] 'wound up, coiled'

EL *hešli* <ḥé-iš-la-e>. Translates Akkadian *qannunu* 'curled, coiled, convoluted'.

\*[xizmí] [P -x (?)] 'clear, bright'

EL *hešmi* <ḥi-iš-mi> UG [ḥ d m]. Translates Akkadian *napāhu* 'to be bright'.

\*[xindzur-] 'apple'

EL *hinzuri* <ḥi-in-zu-ru>.

\*[xidzúy] 'to anger, to vex'

EL *hisuh* <ḥi-su-(ú)-hu>.

\*[xub-] 'to break'

EL *hub* <ḥu-u-bu->. CA <ḥu-bu/wu-uš-t-> 'to smash, destroy'

\*[xubidi] [P x-?] 'calf'

EL *hubidi* <ḥu-(u)-bi-ti>. Translates AMAR-*ti*.

\*[xubrusxi] [P x-] 'melting pot'

EL *hubruši* <ḥu-ub-ru-ush-hi>. A derivative of *hub(u)ri* [P -3] 'a kind of material'.

Cf. Hittite <sup>DUG</sup>*hupuwai* 'pot' and Greek ὅβηζα 'assaying of gold'.

\*[xud-] 'to praise, to magnify'

EL *hud* <ḥu-u-tu-> UG [ḥ d š]. Used in theophoric names: *Huti-b-Teššub*, *Hut-Teššub*.

The goddesses *Hudena* and *Hudellurra* (< ḥude-lluri-na), in charge of birth and fate, may be derivatives of that root. Laroche suggests to interpret *-lluri-* as *-liluri-* (a wife of Teššub in the Kizzuwatna) but this word is written <ḥu-ti-il-lu-ḥu(!)-ur-ra>.

\*[xummi] 'hearth, altar'

CA <ḥu-u-um-mi>.

\*[xuradi] 'soldier'

EL *huradi* <ḥu-ra-ti>. A loanword of Akkadian *hurādu* 'soldier', attested in Hurrian with two prosodic patterns: that of Akkadian \*[xurádi] [P -2] and the native [xúradi] [P x-].

UR <ḥuradie>

\*[xurri] 'night, morning'

DI *hurri*.

\*[xurrúyi]/\*[xuruwúyi] [P -2] 'Hurrian'

EL *hurruhe* <ḥur-ru-u-he> UG [x r ḡ].

\*[xúruwwi] 'rhyton'

CA <ḥu-ú-ru-ub-we>.

\*[xuz-] 'to bind, attach'

CA <ḥu-(ú)-š->.

\*[xuzaurudi] 'jail'

EL *hušauruti* <ḥu-ša-ú-ru-ti>.

### Letter/Phoneme \*i (and \*e)

According to our analysis of the graphic system of the Mitanni letter, the graphemes <i> and <e> stand for [?i] and [i] respectively in initial position. A tentative distinction is therefore possible. Some words are only attested with <e> and may have \*a as initial.

\*[ija]/[iji] ‘which’

EL *ya/ye* <i-ya->. Often used with *andi*. Derivative: *yame-*, *yeme-* ‘anyone’ (cf. Hittite *kuitkuit* ‘anything’; Akkadian *minummē* ‘whatever, everything, all’)

\*[itsuri] ‘runner’ [Cf. *idd-* ‘to go’]

EL *izuri* <i-zu-u-ur>. Translates Akkadian *lāsimu* ‘express messenger, scout’.

\*[id] ‘toward’

EL *ed* UG [i d]

\*[id-] ‘to break’

CA <i-t->

\*[Øídi] [P &gt;] ‘body, person’

EL *edi* <i-ti> UG [i d]. Translates Akkadian *pagru* ‘body’.

UR <edi>

\*[ígi] ‘inside’

EL *egi* <e-gi / i-ki> UG [i g]

\*[iyibini] ‘the town Heliopolis *Ynw*’

EL *Ihibeni*. This word should have some relationship with the Egyptian name *Ynw*, but the phonetics do not match.

\*[iy(i)li] [P -3] ‘safe; to save’

EL *eh(e)li*. Translates Akkadian *etēru* ‘to save a person’.

UR <ulh>

\*[eyeps-] ‘to contract (a muscle)’

CA <e-hé-ep-š->. Passive <e-hé-ep-šu-ul->. Not attested with <#i->.

\*[Øija] ‘the God Ea’

EL *Eya* <e(y)-a> UG [i y].

Frequent qualificatives: *hazzizi* ‘intelligent’, *madi* ‘wise’, *šarri* ‘lord’.

\*[elami] ‘Elam’

EL *Elami* <e-la-mi-ne>. Not attested with <#i->.

\*[ilgi] ‘beautiful decorations’

CA <e-el-ki> NEU <e-il-ki/ga->.

\*[illil] ‘the god En-lil = Kumarbi’

EL *Ellil* UG [i l l]

\*[Øíman] ‘ten’

EL *eman* <e-ma-ni>.

Derivatives: *eman-am-* ‘to multiply tenfold’; *emanamha* ‘tenfold’; *emandi* ‘decuria’; *emanduhlu* ‘decurion’; CA <e-em-ma-an-zé/se<sub>20</sub>-> ‘tenth’.

\*[Øinarya] (Essive) ‘looking or acting like a god’

CA <e-na-ar-ha>.

\*[Indara] ‘the god Indra’

EL *Indara*. From Indo-Aryan.

\*[Øíni] [P x-] ‘god, deity’

EL *eni* <e-ni-> UG [i n]

UR <in> Subarean *e-ne* ‘god’

Derivative: *enumašši* ‘cultural place’ [also written with initial *ú-* (!)]

- \*[inna] 'at some time; when'  
EL *inna-* CA <i-in-na>.
- \*[inu] 'as'  
EL *inu(me)*.
- \*[epxi] 'oven'  
CA <e-ep-hé-e>. Not attested with <#i->.
- \*[eribuski] 'the name of the Golden Eagle of Teššub'  
EL *eribuski*. Not attested with <#i->.
- \*[irwisu] 'tax'  
EL *irwiššu*. Translates Akkadian *ilku* 'payment in lieu of produce; delivery of part of a yield of land held from a higher authority; work done on land held from a higher authority'.
- \*[isxarini] 'cook'  
EL *išharini*. Translates Akkadian *nuhatimmu* 'cook'.
- \*[isi] 'horse' (?)  
EL *ešši*.
- \*[ispal(n)ti] 'quiver'  
EL *išpa(n)ti*. A loanword of Akkadian *išpatu* 'quiver, bow case'.
- \*[istáni] 'among, between'  
EL *ištani*.
- \*[isti(:)] 'P1 Sg., me' [in Absolutive case]  
EL *ište* <iš-te>
- \*[it-] (1) 'to go' [as opposed to *un-* 'to come']  
EL *idd-* <id-du>
- \*[it-] (2) 'to get dressed'  
CA <it-t->
- \*[itkaldzi] 'to sanctify, purify'  
EL *itkalzi* <it-kal-zi>. Translates Hittite *šuppi(y)ahh-* 'to make holy, to sanctify'.
- \*[itku] 'sacred'  
EL *itki* <it-ga/gu>
- \*[itkul] 'to purify oneself'  
EL *itkul-* <it-ku-ul->
- \*[?íw(i)ri]<sup>97</sup> [P -3] 'lord, king'  
EL *ewri* <e-wi-ri> UG [í w r]. Translates Akkadian *malku* 'king', *bēlu* 'master, ruler'. The synonym *šarri* is an Akkadian loanword. Derivatives *ewrardi* 'seigneurie'; *ewriššihi* 'royal'.  
UR <euri, erele>
- \*[iwuru] 'heir'  
EL *ewuru*. Cf. Hittite *iwaru-* 'gift, inheritance, dowry'.
- \*[izabi] 'on the other side'  
CA <i-ša-a-we; e-ša-a-bé-e>.
- \*[?izas] 'P1, me' [in Ergative case]  
EL *išaš* <i-ša-a-š->  
UR <ieše>

<sup>97</sup> Borrowed in Georgian as *ivri* and (less probably) in Armenian as *awrear*. The Armenian word can also be explained as Indo-European according to Diakonoff (1971).

- \*[íži] [P x-] ‘earth, ground’
  - EL *eše* <e-še> UG [i š]
  - UR <eši>
- \*[izikun] ‘to wail, cry out’
  - CA <i-ši-ik-ku-un-n->
- \*[(i)zuγni] ‘silver’ [NEU 1988]. Cf. *ushuni*.
- \*[idzudzi] ‘spelt’
  - CA <i-zu-u-zi>

### Letter/Phoneme \*k

- \*[kab(a)li] ‘copper’
  - CA <ka-(a)-bal-li>.
- \*[katsi] ‘mug, cup’
  - CA <ka-a-(as)-sí>.
- \*[kad-] ‘to say’
  - EL *kad-* <ka-(a)-ti->. Derivatives: CA <ka-ti-il->, <ka<sub>4</sub>-du-ul->, <ka<sub>4</sub>-tul->.
- \*[kadí] [P -x] ‘grain, cereal’
  - EL *kade* <ka-te>.
- \*[kadiy] ‘to fall’ (?)
  - EL *kadih* <ka-ti-hi>.
- \*[kakari] [P x-] ‘sort of ritual bread’
  - EL *kakkari*. CA <ka<sub>4</sub>-ak-ka<sub>4</sub>-ri>.
- \*[kalgamizu] ‘Gilgamesh’
  - EL *Galgamiš* <gal-ga-mi-šu>.
- \*[kalgi] ‘weak’
  - EL *kalgi* <ga-al-gi>. Translates Ug. *dallu*.
- \*[kammi] ‘a kind of bird’
  - CA <ka-(a)-(am)-mé-(e)>.
- \*[kap-] ‘to fill up (with a liquid)’
  - CA <ga/ka-ap-p->.
- \*[karí] [P -x] ‘bird-catcher’
  - CA <ga/ka-re-e>.
- \*[karkarni] ‘a sort of weapon’
  - UR <qarqarani> ‘amour’.
- \*[karubi] ‘cellar, granary’
  - EL *karubi* <ka-ru-bi>. Translates Akkadian *išpikū* ‘storage bin or jar’.
- \*[kazáli] [P -2]<sup>98</sup> meaning unknown. Often used with *šeħali* ‘pure’.
  - EL *kaš(a)li* <ga-(a)-ša-a-li>.
- \*[kazijari] ‘high mountains of the Mesopotamia valley’
  - EL *Gašiyari*.

<sup>98</sup> <ga-a-aš-la> should be another word.

\*[kib-] ‘to put, set’  
 EL *ki(b)-* <ki-bu-, ki-um->. EL <ki-e-en> ‘deposit’ (= Akkadian *šuknu* ‘deposit’)  
 <ki-ba-šu> ‘he put’; <ki-ba-ša-la> ‘they put’

\*[kiban-] ‘to bring’  
 EL *giban* <gi-pa-a-nu> [factive of \*ki(b)-].

\*[kebli] ‘hunter’  
 CA <ke-(e)-eb-li>. Not attested with <-i->.

\*[kitsuwadnayi] ‘Kizzuwatnian’  
 EL *Kizzuwatnahi*.

\*[kig-] ‘three’  
 EL *kig-*. CA <ki-i-ki-e> ‘the three’; CA <ki-i-gi nu-bi> ‘30 000’; <ki-qa-ta-e> ‘in groups of three’; <ki-ki-nu-še> ‘a third’ (<literally, ‘which is caused to be three’); <ki-ka-e> ‘three times’.

\*[kil-] ‘to be fit, in good shape; to be satisfied’  
 CA <ke/ge-(e)-l->.

\*[kil-] ‘(intr.) to rise, go up; (tr.) to raise, to hoist’  
 CA <ki/gi-l->. Derivatives: CA <ki-la-a-n-> (caus.) ‘to cause to rise’; CA <ge-le-ge-l-(e-eš-t-> (rare redupl.) ‘to raise, hoist’.

\*[kildi] ‘health’  
 EL *keldi* <ge-el-te> UG [k 1 d].

\*[kinaxina] ‘purple; red’  
 EL *kinahhi* <ki-na-ah-ḥe-na>.

\*[kir-] ‘to make free, emancipate’  
 CA <ki-(i)-r->.

\*[kirindzi] ‘emancipation’  
 NEU <ki-re-en-zi>. Translates Akkadian *andurāru* ‘emancipation (of private slaves)’ and Hittite *parā tarnā-* ‘to let loose, to let out’.

\*[kirarni] ‘base, foundation’  
 CA <ki-ra-ar-ni>.

\*[kiryi] ‘upper city walls’  
 CA <ki-ir-ḥe>. Cf. Hurrian *adašši*.

\*[kir-] ‘long’  
 EL *keri* <ke-e-ri>. Derivatives: EL *kirul-* \*[kirul-] ‘to become long’; EL *kirašul-* \*[kirazul-] ‘to become long’.

\*[kirzi] ‘long, lengthened’  
 EL *kirši*.

\*[kewira-nna] (Pl.) ‘the senate, the Old Men’  
 EL/CA <LÚ<sup>meš</sup> ke-e-wi-ir-ra-na>. Not attested with <-i->.

\*[kubayı] [P x-] ‘kind of hood, belonging to Teššub’<sup>99</sup>  
 EL *kuwahi* <ku-(ú)-wa/pa-ḥi>.

\*[kud-] ‘(intr.) to fall; (tr.) to kill, to make fall’  
 CA <ku-(ú)t/d->.

<sup>99</sup> Cf. Hebrew *kôþa* ‘helmet’, Greek κύμβαχος ‘helmet’, and Hittite *kupahi-* ‘headgear, headcloth’.

- \*[kul-] 'to say'  
EL *gul-* <gu-li->. (Iterative) CA <ku-lu-u/ú-ri>.
- \*[kul-] 'to leave aside, to stop something'  
CA <ku-u-l->.
- \*[kumdi] 'tower'  
Ca <kum-ti>.
- \*[kumi(H)ni] 'other name of Teššub'  
EL *kummeni* <ku-um-me-e-ne>.
- \*[kundari] 'home of the Gods'  
EL *kundari* <ku-un-ta-ri>
- \*[kundz-] 'to kneel, to bow down'  
CA <ku-un-z/s>.
- \*[kuraxi] 'dapifer'  
CA <ku-ra-ah-hi>.
- \*[kuru] 'anew, once again'  
EL *guru* <gu-ru>. Adverbial form.
- \*[Ku(d)z(u)γ] 'Moon-god'  
EL *kušuh* <ku-zu-h, ku-šu-h> UG [k d/z ɣ].
- \*[kudzuz] 'to keep, retain'  
EL *kuz-* <ku-dzu-u-šu>.

### Letter/Phoneme \*l

The native vocabulary of Hurrian does not display initial #*l*-.

### Letter/Phoneme \*m

- \*[-ma(n)] (enclitic) 'and'  
EL *ma* UG [m]
- \*[-mma] (enclitic) 'P2 Sg., you'
- \*[mad-] 'to show wisdom, to be wise'  
CA <ma-a-t->. Intensive CA <ma-a-ta-aš-t->.
- \*[madi] 'wisdom, intelligence'  
EL *madi* <ma-a-ti>. Translates Hittite *hattatar* 'wisdom'. Also used as a verb *mada-*.
- \*[maganni] 'gift, present'. From Akkadian *maganni* 'gift, present'.  
EL *maganni* <ma-ka-an-ni> UG [m g n]
- \*[magunni] 'desire, need'  
EL *magunni* <ma-gu-un>.
- \*[maxiru] 'market'  
EL *mahiri* <ma-ah-he-er->. From Akkadian *mahīru* 'market place'.
- \*[malladi] 'chopping board'  
CA <ma-al-la-ti>.

\*[man] ‘to be, to exist; P3 SG. he/she/it’  
 EL *man* <ma-a-na>.  
 UR <man>.

\*[mandzaduylı] ‘policeman’  
 EL *manzaduhli*.

\*[marijanni] ‘chariot fighter’  
 EL *maryanni*. A loanword from Indo-Aryan *marya-* with a Hurrian suffix *-nni*.

\*[mázri(?)ani] ‘Egyptian pharaoh’  
 EL *mašrianni* <KUR ma-a-aš-ri-a-an-ni>.

\*[madziri] ‘help’  
 EL *mazeri* <ma-zi-ri>.

\*[midras] ‘Mitra’  
 EL *Mitra* <Mi-it-ra-aš-ši>.

\*[mey-] ‘to be standing (in front of a god or lord)’  
 CA <me/mé-e-ḥ->. Not attested with *-i*.

\*[melax-] ‘to repel, to chase’  
 CA <me-la-ah-ḥ->. Not attested with *-i*.

\*[mitani] ‘Mitanni’  
 EL *Mittanni* <Mi-i-it-ta-a-an-ni> also <Ma-i-teni>

\*[midziri?iwi] ‘of Egypt, Egyptian’  
 EL *Mizri* <KUR mi-zi-ir-ri-e-we>.

\*[muli] ‘river’  
 DI *Muli*.  
 UR <Munaa>.

\*[muz-] ‘to place, tidy up, arrange’  
 CA <mu-(ú)-š->. CA <mu-šu-u-l-> ‘to work, transform (a material)’

\*[muzuni] [P -3] ‘woodstock piler’  
 CA <mu-(ú)-šu-(ú)-ni>.

\*[muz-] ‘just’<sup>100</sup> [used for deities, roads and rivers]  
 EL *muš(u)* <mu-(ú)-šu-ni>  
 UR <muš->

### Letter/Phoneme \*n

\*[nabarbi] [P -3 ?] ‘Pareder of Ninurta/Suwaliyat’  
 EL *Nabarbi* <na-(a)-bar-bi>.

\*[nax-] ‘to sit, to lie’  
 CA <na-ah-ḥ->.

\*[naiyi] ‘meadow, pasture’  
 CA < na-i-ḥé-e>.

\*[nak-] ‘(1) to free, emancipate, release; (2) to melt (a metal)’  
 CA <na-ak-k->.

<sup>100</sup> Diakonoff (1971) translates ‘Erhabene’ = ‘sublime’.

- \*[nali] ‘deer’  
CA <na-a-li>.
- \*[nan-] ‘to beat, to win’  
CA <na-a-n->.
- \*[nära] ‘mother’  
CA <ne-e-ra>. Not attested with *-i-*.
- \*[narija] ‘five’  
CA <na-(a)-ri-ya>.
- \*[natxi] ‘bed (especially the bed of Hebat, Išhara and Šauška)<sup>101</sup>  
EL *nat̪hi* <na-a-at-hi>
- \*[naw-] ‘to graze’  
CA <na-a-w->.
- \*[hawni] ‘pasture’  
CA <na-(a)-ú-ni>.
- \*[nibazúri] ‘liver’  
EL *nibasuri* <ni-pa-šu-u-ri>.
- \*[niyári] ‘dowry’  
EL *nihari* <ni-ha-a-ri> UG [n ɣ r].
- \*[nixri] [P -3] ‘chest’  
EL *niḥri*. CA <ni-ḥi-ir-ni>.
- \*[nikal] ‘Sumerian lunar goddess’  
EL *Nikkal* <ni-ik-kal, ni-ig-gal> UG [n k l].
- \*[nekri] ‘lock’  
CA <ne/né-ek-ri>. Not attested with *-i-*.
- \*[níri] ‘good’  
EL *niri* <ni-i-ri> UG [n r].  
UR <nir(i)b>
- \*[nirubádi] ‘goodness’  
EL *nirubadi* <ni-ru-pa-a-ti>  
Instr. <ni-i-ru-pa-a-ta-e> ‘kindly’
- \*[niruzai] ‘rapidly, promptly’  
EL *nirušae*. Translates Akkadian *hamutta, hamuṭ* ‘promptly’.  
Mit IV 38 <ni-i-ru-ša-e ti-iš-ša-an pa-aš-šu-ša-u> ‘I promptly sent’  
Mit I 58, 70, 82 <ni-ru-ša-e ta-nu-ša-u> ‘I promptly did’
- \*[nisi] ‘gain, advantage; tax’  
EL *nešše* <ne/ni-(e)-eš-še>.
- \*[niz] ‘nine, 9’ (?)  
EL *niš* <ni-šu->.
- \*[nubi] ‘number 10 000’ (< ‘a lot of’)  
EL *nube* <(i)-n(a)u-be>  
UR <itabe>

<sup>101</sup> This word may be a loanword of Sumerian *nád* ‘bed’.

\*[nui] 'ear'

CA <nu-(ú/u)-i>.

\*[nulmi] 'housemaid, female slave'

CA <nu-ul-mi>.

### Letter/Phoneme \*p

It can be noted that initial #p- is rather rare and #pu- attested in only one word, which Neu (1988) writes with a #b-.

\*[pa-] 'to build'

CA <pa-(a)->.

\*[payi] 'head'

EL *pahi* <pa-(a)- hi> UG [p ǵ].

\*[pa(?)ini] 'tamaris'

EL *paini* <pa-a-e-ni>. Used for incense, along with cedar.

\*[pal-] 'to know'

EL *pal* -<pa-li->.

\*[pala] 'canal'

EL *pala* <pa-la>. Cf. *billi*.

UR <pili>

\*[par-] 'to be offended, angry'

CA <pa-a-r->.

\*[paritsadi] [P -3 ?] 'a half-kor'

CA <pa-ri-is-sà-te>.

\*[párlili] 'crime'

EL *par(i)ili* <pa-a-ri-li>.

\*[pas-] 'to send (sby)'

EL *pašš-* <pa-aš-ši->

\*[pasíyi] 'message'

EL *paššihi* <pa-aš-ši-hi>.

\*[pasítxi] 'messenger'

EL *paššithi* <pa-aš-ši-i-it-hi->.

\*[pits-] 'to rejoice'

EL *pis-* <pi-su->

UR <piṣ>

\*[pidári] 'bull'

EL *pedari* <pe-da-a-ri>.

\*[pilakuy(u)li] 'spinner'. From Akkadian *pilakku*, *pilaqqu* 'spindle', *pilakkuhuli* (*pilakku* + Hurrian *-uhli*) 'spinner'.

EL <pi-la-ku-hu-li>.

\*[pind] 'to let in, to let come back'

CA <pé-en-d, pí-in-d>.

- \*[pit-] 'to go back'  
DI *pitt-*. UR <bid>
- \*[pezesx-] 'to spill slowly'  
CA <pé-še-eš-h->. Not attested with *-i-*.
- \*[putsiy-] '(tr.) to dip, soak into'  
CA <pu-ú-sí-h->.
- \*[pud-] 'to announce'  
EL *pud-*. Unclear suffix in CA <pu-ú-ta-an-k-> 'to announce, to denounce'.
- \*[purami] 'servant, slave'  
EL *purame*; CA <pu-ra-am-mi>; NEU <bu-ra-am-mi>. Possible derivative *purapši* 'priest'.  
UR <<sup>LÚ</sup>pura>; <puraa>

### Letter/Phoneme \*r

This phoneme is not attested as initial of native Hurrian words. Loanwords received prothetic vowels.

### Letter/Phoneme \*š [s] and \*ś [ɿ]

- \*[sagari] 'sprout, bud'  
CA <ša-ka-re-e>
- \*[sayadnadi] 'a half-sikel'  
CA <ša-ha-at-na-ti>.
- \*[sáyari] 'ram'  
CA <ša-a-ha-ri>. Translates MÁŠ-GAL.
- \*[sayri] 'garden, orchard'  
EL *šahri* <ša-ah-ri>. Subarean <sarme> 'forest'; Urartian <şare> 'orchard'; Armenian *car* 'tree'
- \*[saly-] 'to listen, understand'  
CA <šal-h->; <ša-h-u-l->.
- \*[sali] or \*[ɿa(:)li] 'daughter'  
EL *šali* <ša-a-li>. UR <selaa>
- \*[salli] 'rampage'  
CA <šal-li, ša-a-al-li>.
- \*[sänardi] 'brotherhood'  
EL *šenardi* <še-na-ar-di>.
- \*[säni] [P x-] 'brother'  
EL *šeni* <še-(e)-ni>.
- \*[sapxali] 'left-side' [as opposed to *wandani* 'right-side']  
EL *šaphali* <ša-ap-ha-li>.
- \*[sar-] 'to ask, desire'  
EL *šar-* <ša-a-ru->.

\*[sarijani] ‘body armour’<sup>102</sup>

EL *šariyanni* <ša-ri-ya-an-ni>.

\*[sarri] ‘king’

EL *šarri*, *šerri*.

\*[sawri] ‘weapon’

EL *šauri* <ša-ú-ri>.

UR <šuri>; Armenian *sor* ‘sword’

\*[sawa(?a)la] ‘year’

EL *šawala* <ša-(a)-wa-a-al-la>.

UR <ša(:)li>

\*[saw-] ‘great’

CA <ša-wu-u-ši> ‘great, august’.

\*[sazari] [P -3] ‘saw’

CA <ša-šar-(ri)>.

\*[si] ‘eye, look’

CA <ši-i>.

\*[sib-] ‘to dry up’

CA <ši-p->.

\*[sid-] ‘to curse’

EL *šed-* <še-ta->.

\*[sed-] ‘to fatten’

CA <še-e-d->.

\*[sidarni] ‘curse, malediction’

EL *šidarni* <ši-da-ar-ni>.

\*[siduri] ‘young woman’ [as opposed to *hubidi* ‘young man’]

EL *šiduri* <ši-du-ri>.

\*[sigladi] ‘sicle’

CA <ši-ik-la-te>.

\*[siyalı] [P -3] ‘pure’

EL *šeħali* <še-e-ħa-li, še-ħa-a-la-, še-ħa-la-a->

UR <šeħ>

\*[siyi] ‘door’ (?)

EL *sehi*. CA <še-e-ħa-an> ‘through the door’.

\*[seyl-] ‘to enter, come in’

CA <še-eħ-l->. Not attested with *-i-*.

\*[sijal-] ‘to place, install, put’

CA <ši-ya-li->.

\*[sildanur-] ‘to pierce, wedge in, penetrate’

CA <ši-il-ta-nu-r->.

\*[sinayila] ‘second’

EL *šinahila* <ši-na-ħi-la>.

<sup>102</sup> Cf. Ugaritic *šryn* and Hebrew *siryōn* ‘body armor, breast armor’.

- \*[sinam-] ‘to double’  
EL *šinam-*.
- \*[sinapsi] ‘temple, cultual building’  
EL *šinapši* <ši-na-ap-ši->.
- \*[sinarbu] ‘two years old’  
EL *šinarbu*.
- \*[sindi] ‘seven’  
EL *šinti* <ši-in-ta>.
- \*[sini] ‘two’  
EL *šini* <ši-in->. CA <ši-i-in-zi/sí> ‘second’.  
UR <šiše>
- \*[sini] ‘P2’ (?)  
EL *šini* <ši-ni->.
- \*[sinurŷi] ‘twin’  
EL *šinurhi*.
- \*[si?irni] ‘splendor; jewel’  
CA <ši-i-ir-ni>.
- \*[sir-] ‘to be equal; to make equal; to count’  
CA <ši-(i)-ir->.
- \*[sirat-] ‘to tell, to narrate’  
CA <ši-ra-t->.
- \*[siri] ‘number’  
CA <ši-i-ri>.
- \*[siri] ‘day’  
DI *šeri*.
- \*[seswi] ‘kid’  
CA <še-eš-we>. Translates MÁŠ.TUR.
- \*[siwi]<sup>103</sup> ‘water, river’  
EL *šiye* <ši-i-e> UG [t y] , [Mari] *šiwe*, [Kizzuwatna] *šiu*.
- \*[sizi] ‘six’  
CA <še-e-ši-e>.
- \*[su]<sup>104</sup> ‘oblique base of *išaš* (P1)’  
EL *šu* <šu-u->.
- \*[su?i] ‘all’  
EL *šui* <šu-e, šu-u-i>.
- \*[su?u] ‘day’  
CA <šu-(u)-ú>.
- \*[suga] ‘together with’  
DI *šuga*.
- \*[suγni] [P -3] ‘wall’  
CA <šu-uh-ni>.

<sup>103</sup> Diakonoff (1971:62) has *šeja-* ‘Wasser, Fluß’ with *-a-* (??).

<sup>104</sup> Diakonoff (1971) has a voiced initial <ž>, but there is no support for a voiced reconstruction.

- \*[suyuri] 'life'  
EL *šuhuri* <šu-hu-ri>.  
UR <šeheri> 'alive'
- \*[suki] 'once'  
CA <šu-uk-ki>.
- \*[suku] 'away'  
EL, DI *šukku*.
- \*[sull-] 'to bind'  
DI *sull-*.
- \*[summi] [P x-] 'hand'  
EL *šummi* <šu-mi->. Prepositional use as 'with, on behalf of'.<sup>105</sup>
- \*[suni] [P x-] 'soul [?]'  
EL *šuni* <šu-(ú)-ni>.
- \*[sur-] 'to kill (a small animal)'  
CA <šu-ú-r->
- \*[suram-] 'to hurry' (?)  
EL *šuram-* <šu-ra-a-ma->.
- \*[surr-] 'to go, walk'  
CA <šu-úr-r->.

### Letter/Phoneme \*t

- \*[tab-] 'to melt (a metal)'  
CA <ta-b/w->. CA <ta-wa-aš-t->.
- \*[tabilija] 'molten'  
CA <ta-bi-li-ya>.
- \*[tab(a)li] [P -3] 'metal-melter; smith'  
CA <tab-li>.
- \*[tabränni] 'metal-melter'  
CA <tab-re-e-en<sub>6</sub>-ni>.
- \*[tad-] 'to love'  
EL *tad-* <ta-a-ta-> UG [t d].
- \*[ta(:)darask-] 'love'  
EL *tadaraški* <ta-a-ta-ra-aš-ka-e>.
- \*[tadugari] 'friendship'  
EL *tadugari* <ta-a-du-ka-a-ri>.
- \*[tagi] 'beautiful'  
EL *tagi* <ta-a-ki> UG [t g].
- \*[tagul-] 'to become beautiful'  
EL *tagul-* <ta-ku-li->.
- \*[tayi] [P > ?] 'man' [as opposed to *ašti* 'woman']  
EL *tahe* <da-a-xe>.

<sup>105</sup> Cf. *abi* 'before', *edi* 'toward', *egi* 'in', *wuri* 'in front of'.

\*[tal-] 'to remove, take away; to purify (from a sin)'

CA <tal->.

\*[talawuzi] 'grand, sovereign'

CA <ta-da-la-a-wu-ú-ši>.

\*[táli] 'tree, wood'

EL *tali* <da-a-li->.

\*[talmast-] 'to celebrate, to magnify'

CA <ta-al-ma-aš-t->.

\*[talmi] 'great, big'

EL *talmi* <ta-al-mi> UG [t l m].

\*[taluylı] 'eunuch'<sup>106</sup>

DI *taluhli*.

\*[tam-] 'nine'

Ca <tam-; ta-am->.

\*[tan-] 'to do' [√t\_?\_n-]

EL *tan* <ta-a-n> UG [t n].

UR <tanu>

\*[taps-] 'low'

EL *tapš-* <ta-ap-šu>.

\*[tapsuy-] 'to cut down; to overthrow'

EL *tapšuh-*.

\*[tari] 'fire'

CA <ta-(a)-ri>.

\*[tarman] '(water) spring'

EL *tarmani* <tar-ma-an->.

UR <tar(a)manele>

\*[tarzuwáni] 'mankind'

EL *taršuwani* <tar-šu-wa-a-ni> UG [t r ɬ w n].

UR <taršuani>

\*[tasp-] 'to hit, bruise, break'

CA <ta-aš-p>, also <tap-š->.

\*[tázi] [P x-] 'gift' (?)

EL *taše* <da-a-še>.

UR <taše>

\*[tazmizu] 'another name of Suwaliyat or Ninurta'

EL *tašmišu* <da-aš-mi-šu>.

\*[tazul-] 'to give, grant'

CA <ta-šu-l->.

\*[ti-] 'to speak'

DI *tii*.

<sup>106</sup> 'servant' in Wilhem (2004:100)

- \*[ti(?)a] ‘many’  
EL *tea* <te-a/ya>.   
UR <tea>
- \*[ti(?)una] ‘in high numbers, many’  
EL *teuna* <te-u-u-na>.   
adv. *teunae*.
- \*[tibúksi] ‘order, command’  
EL *tebušhi* <te-bu-(u)-uš-hi>.
- \*[teγ-] ‘to grow, increase’  
CA <te-h>. CA <te-hé-eš-t>.
- \*[tiyan-] ‘to show’  
EL *tihan-* <ti-i-ha-ni>.
- \*[tijari] ‘spindle’  
EL *tiyari* <ti-ya-ri>.
- \*[til-] ‘to destroy’  
CA <ti-l>. CA <ti-lu-lu-u-uš-t>.
- \*[tili] ‘tax’  
CA <te-li>.
- \*[timerri] ‘black’  
CA <ti-me-er-re-e>.
- \*[tisan] ‘very much’  
EL *tiššan*.
- \*[tisub] ‘Teššub’<sup>107</sup>  
EL *Teššub* <Te-eš-šu-ub> UG (Nom) [t t b] UG (Gen) Teššub-bi [t t p].  
UR <teešebaa> Assyrian <te-és-su-ub>
- \*[tiwi] [P -x] ‘word, thing’ [√t\_H\_w-]  
EL *tiwe* <ti-we-e>.  
UR <tine> ‘name’
- \*[tiza] ‘heart’  
EL *tiša* <ti-ša>.  
UR <tišnu>
- \*[tizayi] ‘elder’  
EL *tešahi* UG [t z ɣ].  
UR <teš>

<sup>107</sup> Teššub (also written Teššup) was the Hurrian god of sky and storm. He was derived from the Hattian Taru. His Hittite and Luwian name was Tarhun (with variant stem forms Tarhunt, Tarhuvant, Tarhunta). He is depicted holding a triple thunderbolt and a weapon, usually an axe (often double-headed) or mace. The sacred bull common throughout Anatolia was his signature animal, represented by his horned crown or by his steeds Seri and Ḫurri, who drew his chariot or carried him on their backs. In the Hurrian schema, he was paired with Ḫebat, the mother goddess; in the Hittite, with the sun goddess of Arinna — a cultus of great antiquity which may ultimately derive from the bull god and mother goddess worshipped at Çatalhöyük in the Neolithic era. Myths also exist of his conflict with the sea creature (possibly a snake or serpent) Ḫedammu (CTH 348). His son was Sarruma. According to Hittite myth, one of his greatest acts was the slaying of the dragon Illuyanka. The Hurrian myth of Teshub’s origin — he was conceived when the god Kumarbi bit off and swallowed his father Anu’s genitals — is a likely inspiration for the story of Uranus, Cronus, and Zeus, which is recounted in Hesiod’s Theogony.

- \*[tizuyi] 'leader, chief'  
EL *tešuhi* <te-šu-hi> UG [t ɬ γ].
- \*[tudigi] 'heap of refuse'  
CA <du-ú-ti-ki>.
- \*[tumni] 'four'  
EL *tumni-* <du-um-ni>.
- \*[tumwa] 'under'  
CA <tu-u-um-wa>.
- \*[tun-] 'to win, to overpower'  
CA <du-ú-n->.
- \*[tunust-] 'to cover, to plaster with'  
CA <tu-nu-u-uš-t->.
- \*[tupi-] 'strong'  
EL *tuppi* <tup-pu->.  
UR <ṭubar>
- \*[tur-] 'to go down'  
CA <du-ú-r->.
- \*[túri-] 'inferior'  
EL *turi* <du-ú-ri> UG [t r].
- \*[turubi] 'enemy'  
EL *tur(u)bi* <du-(u)-ru-b-i>.
- \*[turuxi] 'male, masculine'  
EL *turuḥhi* <du-(u)-ru-uḥ-hi> UG [t r h].
- \*[tuw-] 'clean'  
DI *tuw*.  
UR <tu(w)ae>.
- \*[tuwal-] 'to strike, beat' (?)  
EL *tuwal-* <tu-wa-la->.

### Letter/Phoneme \*u

- \*[u-jit-] 'to be hungry'  
CA <ú-et-t->. This formation looks like a future of a base \*[u-]. Cf. *ulan-*.
- \*[ub-] 'to kill, slaughter (a big animal)'  
EL *ubu*. CA <ú-w->.
- \*[ubi] 'barley'  
CA <ú-bi>.
- \*[?ubi] 'stupid, insane'  
CA <u-be/we>. Hittite *marlant-* 'dumb, stupid, foolish'.
- \*[ugri] 'foot'  
EL *ugri* <ug-ri>.  
UR <kuri><sup>108</sup>

<sup>108</sup> This probably is to be read \*ukri.

- \*[ugul-] ‘to fear’ (?) or maybe better ‘to kneel’  
EL *ugul-* <ú-ku-la>. CA <ú-ku-ul-ga-r-> ‘to kneel’.
- \*[uγi] ‘pig’  
EL *uhi* <ú-ḥi>.
- \*[uja] ‘not’  
DI *uya* UR <úi>
- \*[ulan-] ‘to eat’  
CA <ú-la-a-an->. Cf. *uet-*.
- \*[uli] ‘other’  
EL *uli* <u-u-li>. Variants *ulwi*, *ulbi*.  
UR <uli>
- \*[?ulli-] ‘to destroy’  
EL *ull-* <u-ul-li->.
- \*[?ulmi] ‘weapon’  
CA <u-ul-mi>.
- \*[?ululi-] ‘to die’  
EL *ullul* <ul-lu-li>.
- \*[?úmi:ni] [P x-] ‘country’  
EL *umini* <(u)-u-mi-ni / um-mi-ni> UG [u m n].
- \*[Øun-] ‘to come’  
EL *un-* <ú-(ú)-na> UG [u n]  
UR <ul>
- \*[undu] ‘then, when’  
EL *undu* <(u-)un-du>.
- \*[Øur-] ‘to take place, happen’  
EL *ur-* <ú-ru>.
- \*[Øur-] ‘to desire, promise’ (?)  
EL *wur-* <ú-ú-r->. Never confused with \**bur-* ‘to see’.
- \*[urb-] ‘to kill, sacrifice’  
DI *urb-* UR <urb->.
- \*[ury-] ‘true, faithful’  
EL *urhi* <u-ur-ḥi/ḥa>. Derivative: DI *ur(u)hzi* ‘right, conform’.
- \*[uryupti-] ‘truth; to trust, believe’  
EL *urhupti* <u-ur->.
- \*[urudγi] ‘copper’  
EL *urudhi* <u-ru-ud-ḥi>.
- \*[Øuruwana] ‘Varuna’  
EL *uruwana* <ú-ru-wa-na-aš-ši-il>. The borrowing sounded like \*[Ruwana].
- \*[uruni] ‘back(ward)’  
EL *urunni* <u-ru-un-ni>.
- \*[uruntalli] ‘posterior’  
EL *uruntalli*.
- \*[(u)sxuni] ‘silver’  
EL *ušhuni* <uš-ḥu-(u)-ni>. Cf. *išuhni*.

\*[uzrianni] ‘heir, prince’

DI *ušrianne*.

\*[usta-i] ‘hero’

EL *uštay* <uš-ta-an-ni, uš-ta-e>. With Elidable *-i*.

\*[utxuru] ‘side’

EL *utħuru* <ut-hu-ru>. Adverbial formation with *-u*.

\*[udzi] ‘flesh’

EL *uzi* <u-zi>

### Letter/Phoneme \*w

Many words historically attested with <#w-> can be traced back to \*b. Those listed here are not attested with any alternations.

\*[wali] ‘worm’ (?)

EL *wali*.

\*[wariz-] ‘to go to, to be headed to’

CA <wa-ri-š->.

\*[wudarini] ‘dishwasher’

CA <wu-ta-ri-ni>.

\*[wugugari] ‘(two ?) finger(s)’

CA <wu-ku-ga-ri>. Catsanicos considers the form to be collective, but the *-ugar-* suffix is “dual”.

### Letter/Phonemes \*ž/ǵ and \*dz

These voiced phonemes are not attested word-initially. Cf. [ts].

# 8

## Comparison of Hurrian And Indo-European Vocabularies

Unless noted otherwise, the Hurrian material is cited in the form given in Laroche's *Glossaire*. See the preceding chapter for more information and for a phonemic interpretation of the Hurrian material. Buck (1949) has been consulted extensively as a means to evaluate the semantic plausibility of the proposed cognates.

Hurrian	Proto-Indo-European	Indo-European
Hurrian	Proto-Indo-European	Examples
<b>abi</b> (< * <i>H<sub>1</sub>obhi</i> ) 'front part'; <b>abi-bi</b> 'first'; <b>abi-n</b> 'before'; <b>abi-da</b> 'toward'; <b>awantalli</b> 'anterior'	<i>*H<sub>1</sub>obhi</i> (>* <i>obhi</i> ) 'to, towards; in front of, before; beyond' (Pokorny 1959:287; Walde 1927—1932.I:124; Mann 1984—1987:861)	Sanskrit <i>abhí</i> 'to, towards'; Gatha-Avestan <i>aibī</i> 'to, unto, over'; Old Persian <i>abiy</i> 'to, against, in addition to'; Old Church Slavic <i>obъ</i> 'beyond'; Russian <i>ob</i> [об] 'against, on, upon'; Latin <i>ob</i> 'in front of, before'
<b>adi</b> (< * <i>H<sub>1</sub>odh-i</i> ) 'thus, so'	<i>*H<sub>1</sub>odh-o-</i> (> * <i>odh-o-</i> ) 'now, then, so' (preserved only in Indo-Iranian) (Mayrhofer 1956—1980.I:31; Walde 1927—1932. I:99; Mann 1984—1987:232)	Sanskrit <i>ádhā</i> 'therefore, now, then; moreover, so much the more; and, partly'; Avestan <i>aða</i> 'then, so'; Old Persian <i>ada-</i> 'then'
<b>ag-</b> (< * <i>H<sub>4</sub>eḡ-</i> ) 'to bring, to lead'	<i>*H<sub>4</sub>eḡ-</i> (> * <i>aḡ-</i> ) 'to drive, to lead' (Pokorny 1959:4—6; Walde 1927—1932.I:35—37; Mann 1984—1987:4)	Greek ἄγω 'to lead, to conduct, to guide, to direct, to command, to rule, to instruct'; ἄγος 'leader, chief'; Sanskrit <i>ájati</i> 'to drive, to propel, to throw, to cast', <i>ajá-h</i> 'driver, mover, instigator, leader'; Avestan <i>azaiti</i> 'to drive'; Latin <i>agō</i> 'to drive'; Old Irish <i>agid</i> 'to drive, to lead'; Old Icelandic <i>aka</i> 'to drive (a

		vehicle or an animal drawing a vehicle); to carry or convey (in a vehicle), to cart'; Armenian <i>acem</i> 'to bring, to lead'; Tocharian A <i>āk-</i> 'to lead, to drive, to guide'
<b>ai</b> (< * <i>H<sub>4</sub>e-</i> ) 'when, if'	* <i>H<sub>4</sub>e</i> (> * <i>a</i> ) 'and, or, but' (Mann 1984—1987:1; Kloekhorst 2008:537—538; Puhvel 1984—.1/2:9—10)	Hittite enclitic particle <i>-a</i> 'but'; Old Church Slavic <i>a</i> 'but, and'; Lithuanian <i>o</i> 'but'
<b>a(k)ku</b> (< * <i>H<sub>4</sub>et+k<sup>w</sup>e</i> ) 'other'; <b>akki...aki</b> 'the one...the other'	* <i>H<sub>4</sub>et+k<sup>w</sup>e</i> (> * <i>at-k<sup>w</sup>e</i> ) 'and on the other hand'; * <i>H<sub>4</sub>et-</i> (> * <i>at-</i> ) 'on the other hand' (Pokorny 1959:70—71; Walde 1927—1932.I:42—44; Mann 1984—1987:40; Ernout—Meillet 1979:53)	Latin <i>atque</i> (usually before <i>h</i> and vowels), <i>ac</i> (usually before consonants) 'and, and also; and moreover, and even; and indeed, and so; and then, and suddenly; and especially', originally 'and on the other hand', <i>at</i> 'but, moreover'; Greek <i>ἀτ-</i> in <i>ἀτ-άρ</i> 'but, yet'; Gothic <i>ab-</i> in <i>ab-þan</i> 'but, however'. Note: Latin <i>atque</i> is not from * <i>ad-que</i> as is sometimes assumed (as in, for example, Pokorny 1959:3; cf. Ernout—Meillet 1979:53).
<b>a-ku-l-</b> (< * <i>H<sub>4</sub>egu-</i> ) 'to carve' <b>a-ku-ú-úr-ni</b> 'carving' (Catsanicos 1996)	* <i>H<sub>4</sub>eg-w/u-</i> (> * <i>agw/u-</i> ) '(vb.) to cut into, to hew; (n.) ax' (Pokorny 1959:9; Walde 1927—1932.I: 39; Mann 1984—1987:9)	Greek <i>ἀξίνη</i> 'ax'; Mycenaean <i>aqiyai</i> 'ax'; Gothic <i>aqizi</i> 'ax'; Old English <i>æx</i> 'ax'; Old High German <i>accus, acchus, aches</i> 'ax'
<b>ali-la-n-</b> (< * <i>H<sub>4</sub>el-</i> ) 'to shout, to cry, to lament' (Catsanicos 1996)	* <i>H<sub>4</sub>el-</i> (> * <i>al-</i> ; reduplicated * <i>al-al-</i> ) 'to shout aloud, to cry out' (Pokorny 1959:29; Walde 1927—1932.I:89; Mann 1984—1987:13)	Greek <i>ἀλαλάξω</i> 'to cry or shout aloud; to raise a war-cry', <i>ἀλαλή</i> 'a loud cry'; Sanskrit <i>alalā</i> onomatopoetic interjection; Lithuanian <i>alūoti</i> 'to shout hello'
<b>alu(m)mi</b> (< * <i>H<sub>1</sub>ol-u-</i> ) 'last'	* <i>H<sub>1</sub>ol-</i> (> * <i>ol-</i> ) demonstrative pronoun stem: 'that over there, that yonder' (Pokorny 1959:24—26; Walde 1927—1932.I:84—86; Ernout—Meillet 1979:744)	Latin <i>uls</i> 'beyond'; * <i>ulter</i> 'that which is beyond; that which is on the other side' (not attested): (comparative) <i>ulterior</i> 'farther, beyond', (superlative) <i>ultimus</i> 'most distant, farthest, extreme, last', <i>ultrā</i> 'beyond, on the far side,

		farther'; Oscan <i>últiumam</i> 'farthest'; Old Irish <i>al</i> 'beyond', <i>all(a)e</i> 'yonder', <i>ind-oll</i> 'beyond'
<b>ammati</b> (< * <i>H<sub>1</sub>amma-</i> ) 'grandfather'	* <i>H<sub>1</sub>am(m)a-</i> (> * <i>am(m)a</i> ) nursery word: 'mother, grandmother' (Pokorny 1959:36; Walde 1927—1932.I:53; Mann 1984—1987:18)	Albanian <i>amë</i> 'aunt'; Old Icelandic <i>amma</i> 'grandmother'; Old High German <i>amma</i> 'mother, nurse'; Greek ἀμμάς, ἀμμία 'mother, nurse'; Tocharian B <i>amma-kki</i> 'mother'
<b>andi</b> (< * <i>H<sub>1</sub>o-n-dh-</i> ) 'that'; <b>anni</b> (< * <i>H<sub>1</sub>o-n-</i> ) 'this'	* <i>H<sub>1</sub>e-no-</i> , * <i>H<sub>1</sub>o-no-</i> (> * <i>e-no-</i> , * <i>o-no-</i> ) demonstrative pronoun stem: 'that, yonder' (Pokorny 1959:319—321; Walde 1927—1932.II:336—337; Mann 1984—1987:27; Mayrhofer 1956—1980.I:32; Burrow 1973:277; Puhvel 1984—.1/2:51—55; Kloekhorst 2008:173—174)	Sanskrit (Instr.) <i>anéna</i> , <i>anáyā</i> 'this, these'; Lithuanian <i>añs</i> , <i>anàs</i> 'that, that one'; Old Church Slavic <i>onъ</i> 'that, he'; Hittite <i>an-ni-iš</i> 'that, yonder'
<b>ar-</b> (< * <i>H<sub>4</sub>er-</i> ) 'to give'	* <i>H<sub>4</sub>er-</i> (> * <i>ar-</i> ) 'to distribute, to allot' (Pokorny 1959:61; Walde 1927—1932.I:76—77; Mann 1984—1987:35)	Armenian <i>arnum</i> 'to take'; Avestan <i>ar-</i> in <i>us.frərənaot</i> 'to bestow, to allot'
<b>arde</b> (< * <i>H<sub>1</sub>ordho-</i> ) 'town'	* <i>H<sub>1</sub>ordho-/*H<sub>1</sub>rdho-</i> (> * <i>ordho-/*rdho-</i> ) 'dwelling place', * <i>H<sub>1</sub>ordh-/*H<sub>1</sub>rdh-</i> (> * <i>ordh-/*rdh-</i> ) 'to dwell, to inhabit' (this is a new etymology)	Old English <i>eard</i> 'native country, home, dwelling-place, native soil', <i>eardian</i> 'to dwell', <i>eardung</i> 'dwelling'; Old Saxon <i>ardōn</i> 'to inhabit', <i>ard</i> 'abode, dwelling'; Old High German <i>artōn</i> 'to live, to dwell'; (?) Latin <i>urbs</i> 'a walled town or city'. Note: The Germanic forms are usually derived from Proto-Indo-European * <i>H<sub>2</sub>erH-</i> (> * <i>arə-</i> ) 'to plow', while the Latin form is usually assumed to be of unknown origin.
<b>a-ar-ni</b> (< * <i>H<sub>4</sub>er-</i> ) 'extremity, top, end' (Catsanicos 1996)	* <i>H<sub>4</sub>er-/*H<sub>4</sub>or-/*H<sub>4</sub>r-</i> (> * <i>ar-/*or-/*r-</i> ) 'point, tip, peak'; extended form: * <i>H<sub>4</sub>er-d-/*H<sub>4</sub>or-d-/*H<sub>4</sub>r-d-</i> (> * <i>ard-/*ord-/*rd-</i> ) 'point, peak'.	Greek ἄρδις 'the point of an arrow'; (?) Armenian <i>ardn</i> 'dart, lance'; Old Irish <i>aird</i> 'point, peak'. Also Latin

	/*ord-/*rd-) (Pokorny 1959:63; Walde 1927—1932.I:83—84; Mann 1984—1987:32)	arduuus ‘steep, towering, lofty; high’.
arušul- (< *H <sub>1</sub> or-s-) ‘to hurry’	*H <sub>1</sub> er-s-/*H <sub>1</sub> or-s-/*H <sub>1</sub> r-s- (> *ers-/*ors-/*rs-) ‘to move quickly’ (Pokorny 1959:336—337; Walde 1927—1932.I: 149—151; Mann 1984—1987:249, 891, and 1005; Mayrhofer 1956—1980.I:53; Kloekhorst 2008:208—210)	Sanskrit árṣati ‘to flow, to flow quickly, to glide, to move with a quick motion’; Greek ὄρσι- in ὄρσι-ποντος ‘swift-footed’, -ορσος in παλίν-ορσος ‘starting back’; Latin errō ‘to wander, to stray, to rove’; Lithuanian aršūs ‘furious, violent, fierce’; Hittite (a-)ar-aš-zi ‘to flow’
ašš- (< *H <sub>1</sub> es-) ‘to be seated’	*H <sub>1</sub> ěs- (> *ěs-) ‘to sit, to be seated’ (Pokorny 1959:342—343; Mann 1984—1987:249, 250—251 and 252; Puhvel 1984—.1/2:291—300; Kloekhorst 2008:252—255)	Sanskrit áste ‘to sit’, āsá- <i>h</i> ‘seat’; Avestan āste ‘to sit’; Greek (Attic) ἥσται ‘to sit, to be seated’; Hittite e-eš-zi ‘to sit, to sit down, to be seated’; Hieroglyphic Luwian asas ‘seat’; Tocharian B āsk- ‘to sit, to be seated’
ašte (< *H <sub>4</sub> est-) ‘woman’; aštašhi ‘womanhood’; aštuhhi ‘female, feminine’; aštuzzi ‘feminine, womanly’ (Diakonoff 1971)	*H <sub>4</sub> est- (> *ast-) ‘woman’; zero-grade of stem (*st-) in Sanskrit stri (Walde 1927—1932.II:457 and II:460)	Sanskrit stri (< *H <sub>4</sub> st-r-iH) ‘woman, female, wife’; Avestan stri ‘woman’. An old etymology, going back to August Fick, saw this as the feminine counterpart of Indo-Iranian *asu- in Sanskrit ásura- <i>h</i> ‘(adj.) powerful; (n.) lord, master’ (Rig Veda — later ‘demon, evil spirit’); Avestan ahu-, ahura- ‘lord’. Mayrhofer (1956—1980.I: 65—66) derives ásura- <i>h</i> from *ŋsu-. Note also Sanskrit Asti- the name of a sister of Prāpti (daughter of Jarāsandhas and wife of Kāmsa) in the <i>Mahābhārata</i> .
ašuhhi (< *H <sub>1</sub> os-) ‘pine-tree’	*H <sub>1</sub> os-p- (> *os-p-) ‘aspen, poplar’ (Paul Friedrich 1970:49—53 *osp-; Pokorny 1959:55 *apsā; Walde 1927—	Old Icelandic ösp ‘aspen’; Old English æspe ‘aspen, white poplar’; Old High German aspa ‘aspen’; Lithuanian

	1932.I:50; Mann 1984—1987: 31). Note: there has most likely been metathesis in Balto-Slavic: <i>*ops-</i> < <i>*osp-</i> . <i>*H<sub>1</sub>os-p-</i> is clearly an extended form built upon an unextended <i>*H<sub>1</sub>os-</i> . Not related to <i>*H<sub>2</sub>es-</i> / <i>*H<sub>2</sub>os-</i> (> <i>*as-</i> / <i>*os-</i> ‘ash-tree’) (cf. Old Icelandic <i>askr</i> ‘ash-tree’; Old English <i>æsc</i> ‘ash-tree’).	<i>apušē, epušē</i> ‘black poplar’; Latvian <i>apse</i> ‘aspen’; Russian <i>osina</i> [осина] (< Proto-Slavic <i>*opsīna</i> ) ‘aspen grove’
<b>attai</b> (< <i>*H<sub>1</sub>atta-</i> ) ‘father’	<i>*H<sub>1</sub>atta-</i> (> <i>*atta-</i> ) nursery word: ‘father’ (Mayrhofer 1956—1980.I:27—28; Puhvel 1984—.1/2:224—226; Pokorny 1959:71; Walde 1927—1932.I:44; Mann 1984—1987:39; Kloekhorst 2008:225—226)	Hittite <i>at-ta-aš</i> ‘father’; Greek <i>ἄττα</i> ‘daddy’; Latin <i>atta</i> ‘father’; Gothic <i>atta</i> ‘father’; Albanian <i>atē</i> ‘father’; Old Church Slavic <i>отъсъ</i> ‘father’; Sanskrit (f.) <i>attā</i> ‘mother’ (* <i>atta-</i> ‘father’ is unattested, but note the following: Gujarati <i>ātāji</i> ‘grandfather’; Sinhalese <i>ātā</i> ‘grandfather’; Sindhi <i>ado</i> ‘brother’; Lahndi <i>addā</i> ‘father’)
<b>ed</b> (< <i>*H<sub>1</sub>idh-</i> ) ‘toward’	<i>*H<sub>1</sub>idh-i</i> (> <i>*idhi</i> ), <i>*H<sub>1</sub>idh-e</i> (> <i>*idhe</i> ) ‘yonder, over there’ (Pokorny 1959:284—285; Walde 1927—1932.I:100; Mann 1984—1987:427; Mayrhofer 1956—1980.I:94; Ernout—Meillet 1979:305; Puhvel 1984—.1/2:5)	Sanskrit <i>ihá</i> ‘here, there’; Avestan <i>iða</i> ‘here’; Hittite <i>edi</i> , <i>idi</i> ‘yonder, over there’; Latin <i>ibī</i> ‘there, at that place, thereupon’; Umbrian <i>ife</i> ‘there, thither’; Middle Welsh <i>y, yd</i> ‘to’; Middle Breton <i>ez-</i> ‘to’; Cornish <i>yz, yth-</i> ‘to’
<b>e-ep-hé-e</b> (< <i>*H<sub>1</sub>ep-</i> ) ‘oven’ (Catsanicos 1996)	<i>*H<sub>1</sub>ep-</i> ‘to cook’ (Pokorny 1959:325; Walde 1927—1932.I:124; Mann 1984—1987:1614)	Greek <i>ἔψω</i> ‘to cook by boiling’, <i>ἔφθος</i> (< <i>*epstos</i> ) ‘boiled, cooked’; Armenian <i>ep'hem</i> ‘to cook by boiling’
<b>giban</b> (< <i>*ghebh-</i> ) ‘to bring’	<i>*ghebh-</i> ‘to give’ (Pokorny 1959:407—409; Walde 1927—1932.I:344)	Proto-Germanic <i>*γeþan</i> ‘to give’ > Gothic <i>giban</i> ‘to give’, <i>*fra-gifts</i> ‘presentation, betrothal’; Old Icelandic <i>gefa</i> ‘to give’, <i>gjöf</i> ‘gift’; Old English <i>giefan</i> ‘to give’, <i>giefu</i> ‘gift’; Old Saxon <i>geþan</i> ‘to give’, <i>geþa</i> ‘gift’; Old High German <i>geban</i> ‘to give’, <i>geba</i>

		‘gift’, <i>gift</i> ‘gift; poison’
<b>guru</b> (< * <i>kʷṛt-</i> ) ‘anew, once again’	* <i>kʷṛt-</i> ‘...times’ (Pokorny 1959:641—642; Walde 1927—1932.I:517—518; Mann 1984—1987:1052)	Welsh <i>pryd</i> (< * <i>kʷṛtu-</i> ) ‘time’; Oscan <i>-pert</i> in <i>petiro-pert</i> ‘four times’; Sanskrit <i>-kṛt</i> ‘...time(s)’ in <i>sa-kṛt</i> ‘once’
<b>had-</b> (< * <i>H₂ed-</i> ) ‘to kill’	* <i>H₂ed-</i> (> * <i>ad-</i> ) ‘to cut into, to hollow out, to engrave; to prick, to pierce; to strike, to stab’ (Puhvel 1984— .3: 248—255, 3:255—256, 3:256—257, 3:263—265, and 3:269—274; Kloekhorst 2008: 330—332, 333—334, and 335—336)	Armenian <i>hatanem</i> ‘to cut’, <i>hat</i> ‘piece, cut, slice’; Hittite (3rd sg. pres.) <i>ha-at-zi</i> , <i>ha-at-ta-i</i> , <i>ha-at-ta-a-i</i> , <i>ha-ad-da-i</i> ; <i>ha-az-zi-zi</i> , <i>ha-az-zi-az-zi</i> ‘to make a hole (in), to pierce, to prick, to stab, to slash, to perforate, to penetrate, to stick (as a means of killing), to hit (a target), to strike (especially a musical instrument), to engrave (a tablet)’, (nom.-acc. sg.) <i>ha-at-ta-ra-a[n]</i> ‘prick, awl’, (1st sg. pres.) <i>ha-at-ta-ra-a-mi</i> ‘to prick, to incise, to engrave, to inscribe’, (nom.-acc. sg.) <i>ha-at-tal-la-an</i> ‘club, mace’; (nom. sg.) <i>ha-at-tal-ki-iš-na-aš</i> ‘thorn-bush’, (3rd sg. pres.) <i>ha-at-ra-a-iz-zi</i> ‘to write, to send written word (about), to report, to order, to dispatch’; Luwian (3rd sg. pret.) <i>ha-at-ta-ri-it-ta</i> ‘to prick, to pierce’, (acc. sg.) <i>ha-at-ta-ra-an</i> ‘prick’; Hieroglyphic Luwian <i>ha-tu+ra/i-à-s</i> ‘letter’, (imptv.) <i>ha-tu+ra/i+à</i> ‘write!'; Lycian <i>χttadi</i> ‘to hurt, to damage’, <i>χdrñna</i> (?) ‘inscription’ (?). Note: The medial double writing in some of the Hittite forms cited here point to earlier * <i>H₂edH-</i> .
<b>han-</b> (< * <i>H₂en-</i> ) ‘to bear (a child); to beget’; <b>hani</b> ‘child’; <b>hanuma/i-</b> ‘fertile’ (?)	* <i>H₂en-</i> (> * <i>an-</i> ) ‘to bear, to beget’, * <i>H₂en-o-s</i> (> * <i>anos</i> ) ‘grandmother’, * <i>H₂ons-o-s</i> (> * <i>onsos</i> ) ‘progeny, offspring’	Armenian <i>han</i> ‘grandmother’ (< Pre-Armenian * <i>hano-s</i> ); Hittite <i>ha-an-na-aš</i> ‘grandmother’; Lycian <i>χñna-</i>

	(Pokorny 1959:36—37; Walde 1927—1932.I:55—56; Mann 1984—1987:21; Puhvel 1984—.3:84—86 and 3.224—228; Kloekhorst 2008: 285, 319—321, and 327—328). <i>*H<sub>2</sub>en-o-s</i> (> <i>*anos</i> ) ‘grandmother’ must be carefully distinguished from <i>*H<sub>4</sub>en-o-s</i> (> <i>*anos</i> ) ‘mother’ found in: Hittite <i>an-na-aš</i> ‘mother’; Lycian <i>ēni</i> ‘mother’; Latin <i>anna</i> ‘fosther-mother’; Greek (Hesychius) ἀννίς ‘mother’.	‘grandmother’; Latin <i>anus</i> ‘old woman’; Old High German <i>ana</i> ‘grandmother’; Old Prussian <i>ane</i> ‘grandmother’. Hittite <i>ha-aš-ša-aš</i> ‘progeny, issue, offspring, descendant’ (< <i>*H<sub>2</sub>ons-o-s</i> [cf. Melchert 1994:163]); <i>ha-aš-šu-</i> ‘king’ (< <i>*H<sub>2</sub>ons-u-</i> ), which Puhvel (1984—.3: 240—246) interprets as being from ‘Born One’ or ‘Begotten One’.
<b>ha-pa-a-n-</b> (< <i>*H<sub>2</sub>ep-</i> or <i>*H<sub>2</sub>ebh-</i> ) ‘to set moving’ (Catsanicos 1996)	<i>*H<sub>2</sub>ep-</i> (> <i>*ap-</i> ) or <i>*H<sub>2</sub>ebh-</i> (> <i>*abh-</i> ) ‘(vb.) to move quickly, to run, to flow; (n.) (flowing or running) water, river, stream, current’ (Pokorny 1959:2 and 51—52; Walde 1927—1932.I: 46—47; Mann 1984—1987:1; Puhvel 1984—.3:114—115; Kloekhorst 2008:294—295; Mayrhofer 1956—1980.I:74—75). Note: There may have been two variants of this stem in Proto-Indo-European: (A) <i>*H<sub>2</sub>ep-</i> and (B) <i>*H<sub>2</sub>ebh-</i> .	Hittite (dat. sg.) <i>ha-pa-a</i> ‘stream’, (3rd sg. pres. act.) <i>ha-pa-a-iz-zi</i> ‘to make wet, to moisten’ (?); Palaic (nom. sg.) <i>ha-a-ap-na-aš</i> ‘river, stream’; Luwian (nom. sg.) <i>ha-a-pí-iš</i> ‘river’, <i>*hapā(i)-</i> ‘to irrigate, to water’, (acc. sg.) <i>ha-pa-a-ti-in</i> ‘irrigated land’, (acc. pl.) <i>ha-a-pí-in-ni-in-za</i> ‘little river’; Lycian <i>χba(i)-</i> ‘to irrigate’; Sanskrit <i>āpas-</i> ‘water’; Latin <i>amnis</i> (< <i>*ab-ni-s</i> ) ‘river, stream’; Old Irish <i>ab, abann</i> ‘river’; Old Prussian <i>ape</i> ‘river, stream’; Tocharian B <i>āp</i> ‘water, river, stream’
<b>ha-wi-ir-ni</b> (< <i>*H<sub>3</sub>owi-</i> ) ‘lamb’ (Catsanicos 1996)	<i>*H<sub>3</sub>owi-</i> (> <i>*owi-</i> ) ‘sheep’ (Pokorny 1959:784; Walde 1927—1932.I:167; Mann 1984—1987:897; Puhvel 1984—.3:279—280; Kloekhorst 2008:337—338)	Sanskrit <i>ávi-h</i> ‘sheep’; Greek <i>οῖς, οῖς</i> ‘sheep’; Latin <i>ovis</i> ‘sheep’; Armenian <i>hov-iw</i> ‘shepherd’; Old Irish <i>oí</i> ‘sheep’; Gothic <i>awēbi</i> ‘herd of sheep’; Old English <i>ēow, ēaw, ēw</i> ‘sheep’, <i>ēowu, ēowe</i> ‘ewe’, <i>ēowd, ēowde</i> ‘herd of sheep’; Old High German <i>ouwi, ou</i> ‘ewe’, <i>ewit, owiti</i> ‘herd of sheep’; Lithuanian <i>avìs</i>

		‘sheep’; Old Church Slavic <i>ovъca</i> (< * <i>owi-kā</i> ) ‘sheep’; Hieroglyphic Luwian <i>hawis</i> ‘sheep’; Luwian (nom. sg.) <i>ha-a-ú-i-iš</i> ‘sheep’; Lycian <i>χava-</i> ‘sheep’; Hittite (nom. sg. or pl. ?) <i>ha-a-u-e-eš</i> ‘sheep’; Tocharian B <i>eye</i> ‘sheep’, <i>ā(ᵰ)w</i> ‘ewe’, <i>aiyye</i> ‘ovine, pertaining to sheep’
<b>hawurni</b> (< * <i>H<sub>2</sub>ew-</i> ) ‘sky’	* <i>H<sub>2</sub>ew-</i> ‘to shine, to be bright’; extended forms: (A) * <i>H<sub>2</sub>ew-g-</i> (> * <i>aug-</i> ) and (B) * <i>H<sub>2</sub>ew-s-</i> (> * <i>aus-</i> ) (Pokorny 1959:86—87 and 87; Walde 1927—1932. I:25 and I:26—27; Mann 1984—1987:41, 43, and 44)	(A) * <i>aug-</i> ‘to shine, to be bright’: Greek ἡγή ‘the light of the sun, sunlight’; Albanian <i>agím</i> ‘dawn, daybreak’, <i>agón</i> ‘to dawn’, <i>agój</i> ‘day’  (B) * <i>aus-</i> ‘to shine, to be bright’: Greek (Attic) ἡώς, (Doric) ἀώς, (Aeolian) ἄυως ‘dawn, morning, daybreak’; Sanskrit <i>uṣá</i> ‘morning light, dawn, morning’, <i>usrá-h</i> ‘morning light, daybreak, brightness’; Latin <i>aurōra</i> ‘dawn, the break of day’; Lithuanian <i>aušrà</i> ‘dawn’, <i>aušriné</i> ‘morning (star)’
<b>hazzizzi, hasisi</b> (< * <i>H<sub>2</sub>ets-</i> ) ‘intelligence, wit’	* <i>H<sub>2</sub>et-</i> (> * <i>ăt-</i> ) ‘keen, sharp’ (earlier * <i>H<sub>2</sub>ets-</i> ) (Mann 1984—1987:40)	Old Irish <i>áith</i> ‘keen, sharp, energetic’; Lithuanian <i>otùs</i> , <i>otrùs</i> ‘keen, sharp’; Latvian <i>ātrs</i> ‘keen, sharp’
<b>heldi</b> (< * <i>H<sub>2</sub>el-</i> ) ‘high’. Note: - <i>e-</i> for expected - <i>a-</i> (* <i>haldi</i> ) is unexplained.	* <i>H<sub>2</sub>el-</i> (> * <i>al-</i> ) ‘to grow, to be strong; to nourish, to support, to make strong’ (Pokorny 1959:26—27; Walde 1927—1932.I:86—87; Mann 1984—1987:14, 16, 17)	Latin <i>alō</i> ‘to nourish, to support’, <i>altus</i> ‘grown, great, high’, <i>alēscō</i> ‘to grow up’; Old Irish <i>alim</i> ‘to rear’; Gothic <i>alan</i> ‘to grow’, <i>alds</i> ‘age, life’, <i>alpeis</i> ‘old’, * <i>aldōmō</i> ‘old age’; Old Icelandic <i>aldr</i> ‘age, lifetime’, <i>öld</i> ‘time, age’; Old English <i>alan</i> ‘to nourish, to produce’, <i>eald</i> ‘old’; Old High German <i>alt</i> ‘old’, <i>altī</i> , <i>elī</i> ‘age’; Greek ἀλδαίνω ‘to make to grow’

* <b>hé-en-</b> , * <b>hi-in-</b> (< * <i>H<sub>2</sub>in-</i> ) form extracted from: <b>hé-en-ni</b> (< * <i>H<sub>2</sub>in+nu</i> ) ‘now’; <b>hé-en-z/s-</b> (< * <i>H<sub>2</sub>in+dzH<sub>1</sub>-</i> ) ‘(intr.) to be constrained, to lack money; (tr.) to oppress, to constrain’; <b>hé-en-za-sà-a</b> ‘lacking money’; <b>hi-in-zi/sí-ti</b> ‘want, need’	* <i>H<sub>2</sub>in(H<sub>1</sub>)-u-/*H<sub>2</sub>ñ(H<sub>1</sub>)-ew-</i> (> * <i>ēnu-/*ñnew-</i> ) ‘without; away from, apart from’ (Pokorny 1959:318; Walde 1927— 1932.I:127—128; Mann 1984—1987:257—258; Mallory—Adams 1997:646)	Gothic <i>inu</i> (< * <i>ēnu</i> ) ‘without’; Old Icelandic <i>án, ón</i> (< * <i>ēnu</i> ) ‘without’; Old Saxon <i>āno</i> (< * <i>ēnu</i> ) ‘without’; Old High German <i>āno, ānu, āna</i> (< * <i>ēnu</i> ) ‘without’; Greek <i>ἄνευ</i> (< * <i>ñnew-</i> ) ‘without; away from, far from’
<b>henni</b> (< * <i>H<sub>2</sub>in+nu</i> ) ‘now’; * <i>nu</i> > <i>ni</i> through assimilation	* <i>nu</i> ‘now’ (Pokorny 1959:770; Walde 1927—1932.II:340; Mann 1984—1987:854—855; Kloekhorst 2008:607—608)	Sanskrit <i>nú, nū</i> ‘now’; Greek <i>vú, vó, vūv</i> ‘now’; Latin <i>nunc</i> ‘now’; Gothic <i>nu</i> ‘now’; Old Icelandic <i>nú</i> ‘now’; Old English <i>nū</i> ‘now’; Old High German <i>nū</i> ‘now’; Lithuanian <i>nù</i> ‘now’; Old Church Slavic <i>nyně</i> ‘now’; Tocharian A <i>nu</i> , B <i>no</i> ‘however, but; then, (al)though’; Hittite <i>nu</i> ‘and, but’; Palaic <i>nu-ú</i> ‘now’
<b>hé-en-z/s-</b> (< * <i>H<sub>2</sub>in+dzH<sub>1</sub>-</i> ) ‘(intr.) to be constrained, to lack money; (tr.) to oppress, to constrain’; <b>hé-en-za-sà-a</b> ‘lacking money’; <b>hi-in-zi/sí-ti</b> ‘want, need’ (Catsanicos 1996)	* <i>deH<sub>1</sub>-</i> (> * <i>dē-</i> ) ‘to lack, to need’ (earlier * <i>dzeH<sub>1</sub>-</i> ) (parallel root * <i>dew-</i> ~ * <i>dews-</i> ) (Pokorny 1959:219—220; Walde 1927—1932.I:782; Mann 1984—1987:134 and 144)	Greek δέω ‘to lack, to need, to want’ (cf. Homeric δῆσεν), ἐν-δέω ‘to be in want; to be wanting or lacking’, ἐν-δεια ‘lack, want, need’; Albanian <i>due, dua</i> ‘to want, to need’, <i>do</i> (future formant). * <i>deH<sub>1</sub>-</i> (> * <i>dē-</i> ) may ultimately be the source of Sanskrit <i>dīná-h</i> ‘scarce, scanty’, hitherto unexplained (cf. Mayrhofer 1956—1980.II:45—46).
<b>heyari</b> (< * <i>H<sub>2</sub>iy-ar-</i> ) ‘all’	* <i>H<sub>2</sub>oy-</i> (> * <i>oy-</i> ) in words for ‘one’: * <i>oy-ko-/*oy-k<sup>w</sup>o- oy-wo-, *<i>oy-no-</i> (Pokorny 1959:286; Walde 1927— 1932.I:101; Mann 1984— 1987:866 and 868)</i>	Mitanni Indo-Aryan <i>aika-</i> ‘one’; Sanskrit <i>éka-</i> ‘one’; Avestan <i>aēva-</i> ‘one’; Old Persian <i>aiva-</i> ‘one’; Greek <i>οῖος</i> ‘alone, lone, lonely’, <i>οῖνη</i> ‘the ace (on dice)’; Latin <i>ūnus</i> ‘one’; Old Irish <i>ón</i> ‘one’; Gothic <i>ains</i> ‘one’; Lithuanian <i>vienas</i> ‘one’; Old Prussian <i>ains</i> ‘one’
<b>idd-</b> (< * <i>H<sub>1</sub>ey-/*H<sub>1</sub>i-</i> ) ‘to go’;	* <i>H<sub>1</sub>ey-/*H<sub>1</sub>i-</i> (> * <i>ey-/*i-</i> ) ‘to	Greek (1st sg. pres.) <i>εἰμι</i> ‘I

<b>izuri</b> ‘runner’	go’ (Pokorny 1959:293—297; Walde 1927—1932.I:102—105; Mann 1984—1987:234; Kloekhorst 2008:375—376)	go’, (1st pl. pres.) ՚μεν ‘we go’; Sanskrit (1st sg. pres.) émi ‘I go’, (3rd sg. pres.) éti ‘goes’, (1st pl. pres.) imáh ‘we go’, (3rd pl. pres.) yánti ‘they go’; Latin (1st sg. pres.) eō ‘I go’; Old Lithuanian (1st sg. pres.) eīmi ‘I go’, (3rd sg. pres.) eīti ‘goes’; Old Church Slavic idq, iti ‘to go’; Luwian (3rd sg. pres.) i-ti ‘goes’; Hittite (imprt.) i-it ‘go!'; Tocharian A (1st pl.) ymäs ‘we go’, B (1st sg.) yam, yam ‘I go’
<b>ište</b> (Abs.) ‘me’; <b>išaš</b> (Erg.) ‘me’ (<*i+šu < *H <sub>1</sub> e-)	*H <sub>1</sub> eḡ, *H <sub>1</sub> egoH, *H <sub>1</sub> eǵoHm, *H <sub>1</sub> eǵhom, *H <sub>1</sub> eǵ, *H <sub>1</sub> eǵom (> *eǵ, *eǵō, *eǵōm, *eǵhom, *eǵ, *eǵom); these forms are to be analyzed as *H <sub>1</sub> e- + *k- or *ǵ- or *ǵh- + *-oH or *-om (Pokorny 1959:291; Walde 1927—1932.I:115—116; Mann 1994—1987:233 and 238)	*H <sub>1</sub> eḡ (Gothic ik); *H <sub>1</sub> egoH (Latin ego; Greek ἐγώ); *H <sub>1</sub> eǵoHm (Homeric ἐγών; Laconian ἐγώνη); *H <sub>1</sub> eǵhom (Sanskrit ahám; Avestan azəm); *H <sub>1</sub> eǵ (Latvian es; Lithuanian aš [Old Lithuanian eš]; Armenian es); *H <sub>1</sub> eǵom (Old Church Slavic azb)
<b>kadih</b> (< *kad-) ‘to fall’ (?)	*kad- ‘to fall’ (Pokorny 1959: 516; Walde 1927—1932.I: 339—340; Mann 1984—1987: 597)	Sanskrit śad- ‘to fall’, śada-h ‘falling’; Latin cadō ‘to fall, to fall down, to drop’
<b>kalgi</b> (< *kol-) ‘weak’	*kol-/*kol-/*kl - ‘to strike, to wound, to injure’ (this root has numerous derivatives) (Pokorny 1959:545—547; Walde 1927—1932.I:436—440; Mann 1984—1987:464, 526, and 527)	Greek κλᾶ- in ἀνα-κλάω ‘to bend back, to break off’; Latin calamitās ‘loss, misfortune, damage, calamity’, clādēs ‘disaster, injury’, -cellō in percellō ‘to beat down, to strike down, to overturn, to shatter; to overthrow, to ruin; to strike, to push’; Old Irish coll ‘loss’; Welsh cleddyf ‘sword’, coll ‘destruction, loss’, ar-choll ‘wound’, clais ‘bruise’; Gothic halts ‘lame’; Old English healt ‘lame, limping’, hild ‘war, battle’;

		Old High German <i>halz</i> ‘lame’; Middle High German <i>hell</i> , <i>helles</i> ‘faint, weak’; Old Church Slavic <i>kolq</i> , <i>klati</i> ‘to prick, to hew’; Lithuanian <i>kalù</i> , <i>kálti</i> ‘to forge, to strike’
<b>karubi</b> (< * <i>gor-</i> ) ‘cellar, granary’	* <i>grH-no-</i> (> * <i>gr̥no-</i> ) ‘grain’ (Pokorny 1959:391; Walde 1927—1932.I:600; Mann 1984—1987:405—406)	Latin <i>grānum</i> ‘grain’; Old Irish <i>grán</i> ‘grain’; Gothic <i>kaurn</i> ‘grain’; Old English <i>corn</i> ‘grain’, <i>cyrnel</i> ‘kernel, seed’; Old High German <i>korn</i> ‘grain’; Old Church Slavic <i>zr̥no</i> , <i>zr̥no</i> ‘grain’; Russian <i>zernó</i> [зерно] ‘grain’
<b>ki/gi-l-</b> (< * <i>kel-</i> ) ‘(intr.) to rise, go up; (tr.) to raise, to hoist’ (Catsanicos 1996)	* <i>kel-</i> ‘(vb.) to lift, to raise, to elevate; (n.) hill’ (Pokorny 1959:544; Walde 1927—1932.I:433—434; Mann 1984—1987:485, 486, 487, 527, and 528)	Greek <i>κολωνός</i> ‘hill’; Latin <i>celsus</i> ‘raised up, high, lofty’, <i>collis</i> ‘hill’, <i>column</i> ‘that which is raised on high; a height, summit, ridge’; Old English <i>hyll</i> ‘hill’; Old Saxon <i>holm</i> ‘hill’; Lithuanian <i>keliù</i> , <i>kélti</i> ‘to lift, to raise’, <i>kálnas</i> ‘hill, mound’
<b>ki-ir-hé</b> (< * <i>ker-</i> ) ‘upper city walls’ (Catsanicos 1996)	* <i>ker-/*kor-/*kr̥-, *kerH-/*korH-/*kr̥H-</i> ‘uppermost part (of anything): horn, head, skull, crown of head; tip, top, summit, peak; horned animal’ (Pokorny 1959:574—577; Walde 1927—1932.I:403—408; Mann 1984—1987:609—610, 611, 612, 613, 614, 638, 638—639, 639, 640; Puhvel 1984—4:77—79; Kloekhorst 2008:446—447)	Sanskrit <i>śíras-</i> (< * <i>kr̥Hes-</i> ) ‘head, skull’, <i>śr̥īga-m</i> ‘the horn of an animal; the tusk of an elephant; the top or summit of a mountain, peak; the highest part of a building, pinnacle, turret; any peak or projection or lofty object, elevation, point, end, extremity’, <i>śírsá-h</i> ‘the head, skull; the upper part, tip, top (of anything)’, <i>śírsán-</i> (< * <i>kr̥Hsen-</i> ) ‘the head’; Avestan <i>sarah-</i> ‘head’, <i>srū-</i> , <i>srvā-</i> ‘horn’; Greek <i>κέρας</i> ‘the horn of an animal’, <i>κάρη</i> (Ionic <i>κάρη</i> ) ‘the head; the head or top of anything’, <i>κεραός</i> (< * <i>κεραFός</i> ) ‘horned’, <i>κρāvίον</i> ‘the upper part of the head, the skull’, <i>κόρυμβος</i> ‘the

		uppermost point, head, end', κορυφή 'the head, top, highest point; the crown or top of the head; the top or peak of a mountain'; Armenian <i>sar</i> 'top, summit, peak'; Latin <i>cornū</i> 'a horn', <i>cerebrum</i> 'the brain'; Gothic <i>haurn</i> 'horn'; Old Icelandic <i>horn</i> 'horn', <i>hjarsi</i> 'the crown of the head', <i>hjarni</i> 'brain'; Old English <i>horn</i> 'horn'; Old High German <i>horn</i> 'horn', <i>hirni</i> 'brain'; Hittite <i>ka-ra-a-wa-ar</i> 'horn(s), antler(s)'.
<b>ku-(ú-)t/d-</b> (< * <i>g<sup>w</sup>edh-</i> ) '(intr.) to fall; (tr.) to kill, to make fall' (Catsanicos 1996)	* <i>g<sup>w</sup>edh-/*g<sup>w</sup>odh-</i> 'to strike, to beat, to smash' (Pokorny 1959:466—467; Walde 1927—1932.I:672—673; Mann 1984—1987:351)	Middle High German <i>quetzen</i> , <i>quetschen</i> 'to bruise, to mash, to crush'; Swedish <i>kvadda</i> 'to smash to pieces'
<b>kul-</b> (< * <i>g<sup>w</sup>l-</i> ) 'to say'	* <i>g<sup>w</sup>el-/*g<sup>w</sup>l-</i> ~ * <i>g<sup>w</sup>l-</i> 'to call out, to cry out' (Brugmann 1904:176 Greek βλ- < * <i>g<sup>w</sup>l-</i> )	Greek βληχή (Doric βλᾶχά) (< * <i>g<sup>w</sup>l-ā-</i> < * <i>g<sup>w</sup>l-eH<sub>2</sub>-</i> ) 'a bleating, the wailing of children'; Old High German <i>klaga</i> 'cries of pain; complaint, lament, lamentation, grievance'
<b>ku-u-l-</b> (< * <i>k<sup>w</sup>l-</i> ) 'to leave aside, to stop something' (Catsanicos 1996)	* <i>k<sup>w</sup>el-/*k<sup>w</sup>ol-/*k<sup>w</sup>l-</i> 'to bring to an end' (Pokorny 1959:640; Walde 1927—1932.I:517)	Greek τέλος (< * <i>k<sup>w</sup>elo-s</i> ) 'the fulfillment or completion of anything, that is, its consummation, issue, result, end; the end (of life), death', τελέω 'to complete, to fulfill, to accomplish', τελευτάω 'to complete, to finish, to accomplish', τελευτή 'finishing, completion, accomplishment; a termination, end; the end, extremity (of anything)'; Luwian <i>ku(wa)lana-</i> 'course, (life)time', (1st sg. pres. act.) <i>ku-la-ni-wi</i> 'to bring to an end'

<b>kum-ti</b> (< * <i>kum-</i> or * <i>kum-</i> ) ‘tower’ (Catsanicos 1996)	* <i>kum-bo-s</i> , * <i>kum-bā</i> ‘point, tip, top, head’ and * <i>kum-bo-s</i> (also * <i>kum-bho-s</i> ) ‘hump’ (Pokorny 1959:592; Walde 1927—1932.I:375—376; Mann 1984—1987:587 and 643; Mayrhofer 1956—1980.I:233)	Greek κύμβη ‘head’; Sanskrit <i>kúmba-h</i> ‘a kind of headdress for women’; Norwegian <i>hump</i> ‘hummock, bump, gnurl’; English <i>hump</i> ‘protuberance on the back’; Dutch <i>homp</i> ‘lump’
<b>ku-un-z/s-</b> (< * <i>g̑n̑-</i> ) ‘to kneel, to bow down’ (Catsanicos 1996)	* <i>genu-</i> , * <i>g̑new-</i> ‘knee’ (< * <i>g̑en-</i> /* <i>g̑on-</i> /* <i>g̑n̑-</i> ‘to kneel, to bow down’ apparently only preserved in Hittite) (Pokorny 1959:380—381; Walde 1927—1932.I:586—587; Mann 1984—1987:393 and 401; Puhvel 1984—.4:41—42; Kloekhorst 2008:433—434)	Sanskrit <i>jánu, jñu-</i> ‘knee’; Avestan (acc. sg.) <i>žnūm</i> ‘knee’; Greek γόνυ ‘knee’, γνύξ ‘on one’s knees, with bent knee’; Armenian <i>cunr</i> (< * <i>g̑onu-r-</i> ) ‘knee’; Latin <i>genū</i> ‘knee’; Gothic <i>kniu</i> ‘knee’ (< * <i>g̑new-</i> ); Old Icelandic <i>kné</i> ‘knee’; Old English <i>cnēo(w)</i> ‘knee’; Old High German <i>chniu</i> ‘knee’; Hittite <i>gi-e-nu, gi-nu</i> ‘knee’, <i>kanen(iye/a)-</i> ‘to bow down, to crouch, to squat’; Tocharian A (dual) <i>kanwem</i> , B (dual) <i>kenī(ne)</i> ‘knees’
<b>kuz-</b> (< * <i>kudzh</i> ) ‘to keep, to retain’	* <i>kewdh-/*kowdh-/*kudh-</i> ‘to cover, to hide, to conceal’ (earlier * <i>kewdzh-/*kowdzh-/*kudzh-</i> ) (Pokorny 1959:952; Walde 1927—1932.II:550; Mann 1984—1987:495—496 and 580)	Greek κεύθω ‘to cover, to cover up, to hide; to contain; to conceal’; Old English <i>hȳdan</i> ‘to hide, to conceal’; Welsh <i>cuddio</i> ‘to hide’, <i>cudd</i> ‘hidden’
<b>-lla</b> absolute plural marker; <b>-l(la), -lle</b> (< * <i>H<sub>1</sub>lo-</i> , * <i>H<sub>1</sub>le-</i> ) 3rd person pl. absolute enclitic personal pronoun	* <i>H<sub>1</sub>ol-</i> (> * <i>ol-</i> ) demonstrative pronoun stem: ‘that over there, that yonder’ (Pokorny 1959:24—26; Walde 1927—1932.I:84—86; Mann 1984—1987:872—873 and 873)	Latin (later variants of <i>ollus</i> , etc.) <i>ille, illa, illud</i> ‘that’, <i>olim</i> ‘at that time’, <i>ole, olle, ollus, olus, olla</i> ‘that’, <i>ultrā</i> (< * <i>oltrād</i> ) ‘beyond, on the far side, farther’; Umbrian <i>ulo, ulu</i> ‘there, at that place’; Old Church Slavic <i>lani</i> (< * <i>ol-nei</i> ) ‘last year’
<b>ma</b> (< * <i>ma</i> ) ‘and’	*- <i>ma</i> enclitic particle: ‘but, and’ (Puhvel 1984—.6:3—4; Kloekhorst 2008:537—538; Mann 1984—1987:723)	Hittite enclitic particle <i>-ma</i> ‘however, but, and’; Palaic <i>-ma</i> (meaning uncertain); Lydian enclitic <i>-m</i> ; Lycian

		stressed particle <i>me</i> ; Greek (Thessalian) μά = δέ ‘but’
<b>-ma</b> (< * <i>mē</i> /* <i>mō</i> ) negative suffix	* <i>mē</i> (prohibitive/negative particle) ‘do not; no, not’ (Pokorny 1959:703; Walde 1927—1932.II:236—237; Mann 1984—1987:738)	Sanskrit <i>mā</i> ‘do not; not, that not, lest, would that not’; Greek μή ‘do not; no, not’; Armenian <i>mi</i> ‘do not’; Tocharian A (prohibitive and negative particle) <i>mā</i> ‘not, no’, (prohibitive particle) <i>mar</i> ‘do not’, also used as a negative prefix as the equivalent of English ‘un-’
<b>madi</b> (< * <i>mod-</i> ) ‘wisdom, intelligence’; <b>ma-a-t-</b> (< * <i>mod-</i> ) ‘to show wisdom, to be wise’ (Catsanicos 1996)	* <i>med-/*mod-</i> ‘to measure, to measure out; to estimate, to reckon’ (Pokorny 1959:705—706; Walde 1927—1932.II: 259; Mann 1984—1987:739, 739—740, 740, 782—783; Puhvel 1984—.6:167—168)	Greek μέδομαι ‘to provide for, to be mindful of’; Latin <i>meditor</i> ‘to think over, to consider’, <i>modus</i> ‘measure, standard of measure’; Hittite (gen. sg.) <i>mi-te-eš-na-aš</i> ‘measure, weight’, (abl. sg.) <i>mi-id-na-az</i> ‘measure, counsel, ordinance, resolve, device’; Gothic <i>mitan</i> ‘to measure’; Old Icelandic <i>meta</i> ‘to reckon, to estimate’; Old English <i>metan</i> ‘to measure, to mark off, to mete out, to compare’; Old High German <i>mezzan</i> ‘to measure, to compare, to compute’, <i>mez</i> ‘measure’
<b>ma-al-la-ti</b> (< * <i>mol-</i> ) ‘chopping board’ (Catsanicos 1996)	* <i>mel-/*mol-/*ml-</i> ‘to rub, to crush, to grind’ (Pokorny 1959:716—719; Walde 1927—1932.II:284—291; Mann 1984—1987:728, 749, 750, 751—752, 752, 753, 773, 773—774, 774, 775—776, 776, 776—777, 777, 777—778, 791—792, 792—793, 793, 815, 816; Kloekhorst 2008:547—548)	Hittite <i>ma-al-la-i</i> ‘to crush, to grind’, <i>me-ma-al</i> ‘meal’; Sanskrit <i>mṛṇāti</i> , <i>mṛṇāti</i> ‘to crush, to grind’, <i>mṛdū-h</i> ‘soft, delicate, tender, pliant, mild, gentle, weak, feeble’, <i>mlāyati</i> ‘to wither, to fade’; Greek ἀμαλδύνω ‘to soften’, ἀμαλός ‘soft, weak, feeble’, <i>μαλακός</i> ‘soft’, <i>μαλάσσω</i> ‘to make soft’, <i>μύλη</i> ‘mill, handmill’, <i>μύλος</i> ‘millstone’; Latin <i>molō</i> ‘to grind’, <i>mollis</i> ‘soft, tender, pliant, supple, flexible, yielding’, <i>mola</i> ‘millstone’,

		<i>molīna, molīnum</i> ‘a mill’; Gothic <i>malan</i> ‘to grind’, <i>mildiba</i> ‘mildness, kindness’, <i>ga-malwjan</i> ‘to grind up, to crush’, <i>malma</i> ‘sand’, <i>mulda</i> ‘dust’; Lithuanian <i>malù, málти</i> ‘to grind’; Old Church Slavic <i>meljо, mlěti</i> ‘to grind’; Tocharian A <i>malyw-</i> , B <i>mely-</i> ‘to crush, to squeeze, to lay waste’, B <i>mäl-</i> ‘to crush, to repress, to oppress’, B <i>mällarske</i> ‘pressing’ (?) or ‘pliant’ (?), B <i>mälle</i> ‘ground-down, dull’, B <i>mällalñe</i> ‘crushing’
<b>man-</b> (< * <i>mon-</i> ) ‘to be, to exist’	* <i>men-/*mon-/*mŋ-</i> ‘to stay, to remain, to abide, to dwell; to be firm, steadfast, established, enduring’ (Pokorny 1959:729; Walde 1927—1932.II:267; Mann 1984—1987:756—757 and 796)	Sanskrit <i>man-</i> ‘to wait, to stay, to hesitate’; Armenian <i>mnam</i> ‘to remain’; Greek <i>μένω</i> ‘to stand fast; to stay at home, to stay where one is at; (of things) to be lasting, to remain, to stand, to be stable, to be permanent; to abide’; Latin <i>maneo</i> ‘to stay, to remain; to endure, to last; to abide; to wait for, to await’. Probably also Tocharian A/B <i>mäsk-</i> (< * <i>mŋ-sk-e/o-</i> ) ‘to be’.
<b>mane, mani</b> (< * <i>mo-n-</i> ) third person personal pronoun (Abs. sg. independent); <b>-me, -ma</b> (< *- <i>me</i> , *- <i>mo</i> ) (enclitic) ‘he, she, it’	* <i>mo-</i> demonstrative pronoun stem: ‘this, that’ (preserved only in Celtic)	Welsh <i>ýma</i> (poetical <i>ýman</i> ) ‘here’; Breton <i>ma, man</i> ‘here’; Cornish <i>ma</i> ‘here’
<b>mazeri</b> (< * <i>madz-</i> ) ‘help’	* <i>mad-</i> ‘to help, to support, to care for, to nourish’ (earlier * <i>madz-</i> ) (this is a new etymology)	Gothic <i>matjan</i> ‘to feed’, <i>mats</i> ‘food’; Old Icelandic <i>matr</i> ‘food, meat’, <i>matast</i> ‘to take food, to take a meal’; Old English <i>mete</i> ‘food’, <i>metsian</i> ‘to feed’; Old High German <i>maz</i> ‘food, nourishment’
<b>na-a-w-</b> (< * <i>now-</i> ) ‘to graze’; <b>na-(a-)ú-ni</b> (< * <i>now-n-</i> ) ‘pasture’ (Catsanicos	* <i>newos</i> ‘new’ (> various derivatives meaning ‘new land, fallow land, virgin land	Latin <i>novāle</i> ‘fallow land; a cultivated field’; Greek <i>νείος</i> ‘new land, fallow land’; Old

1996)	or soil') (Pokorny 1959:769; Walde 1927—1932.II:324; Mann 1984—1987:841, 842, 842—843, and 843; Ernout—Meillet 1979:447—448)	Church Slavic <i>novina</i> ‘virgin land’; Russian <i>новъ</i> [новъ], <i>новинá</i> [новина] ‘virgin soil’
<b>-ne</b> (sg.), <b>-nna</b> (pl.) (< * <i>ne-</i> , * <i>no-</i> ) “definite article”	* <i>ne-</i> , * <i>no-</i> demonstrative pronoun stem: ‘that, yonder’ (Pokorny 1959:319—321; Walde 1927—1932.II:336—337)	Hittite <i>na-aš</i> ‘that’; Armenian <i>na</i> ‘that; he, she, it; him, her’
<b>ne/né-ek-ri</b> (< * <i>nek-</i> or * <i>negh-</i> ) ‘lock’ (Catsanicos 1996)	(A) * <i>nek-</i> ‘to tie, to bind, to fasten together’ (Mann 1984—1987:833; Ernout—Meillet 1979:435)  (B) * <i>negh-</i> ‘to tie, to bind, to fasten together’ (Mann 1984—1987:831). Note: Mayrhofer (1956—1980.II:147—148) derives Sanskrit <i>náhyati</i> from * <i>nedh-</i> , but this is rejected by Ernout—Meillet (1979:435).	(A) * <i>nek-</i> ‘to tie, to bind, to fasten together’ > Latin <i>nectō</i> ‘to tie, to bind, to connect, to fasten together’, <i>nexus</i> ‘a binding, tying together, entwining, connecting’; Old Irish <i>nascid</i> ‘to tie, to bind’  (B) * <i>negh-</i> ‘to tie, to bind, to fasten together’ > Sanskrit <i>náhyati</i> ‘to bind, to tie, to fasten, to bind on or round or together’, <i>náhasara-h</i> ‘bolt, nail, crotchet’
<b>nešše</b> (< * <i>nes-</i> ) ‘gain, advantage; tax’	* <i>nes-/*nos-</i> ‘to go after, to seek; to recover, to survive; to thrive, to prosper, to succeed’ (Pokorny 1959:766—767; Walde 1927—1932.II:334—335; Mann 1984—1987:839; Mayrhofer 1956—1980.II: 146—147)	Tocharian B <i>ñasso</i> ‘share, portion, inheritance’, <i>ñäsk-</i> (< * <i>nes-ske-</i> ) ‘(active) to demand, to require; (middle) to seek’, <i>-ñässe</i> ‘-seeking, exerting’, <i>neske-</i> ‘tribute’; Gothic <i>nasjan</i> ‘to heal, to save’, <i>ga-nisan</i> ‘to be saved’, <i>ga-nists</i> ‘rescue, salvation’; Old English <i>nerian</i> ‘to save, to protect’, <i>nerung</i> ‘protection’, <i>ge-nesan</i> ‘to be saved; to escape from, to survive’, <i>nest</i> ‘provisions, rations’; Old High German <i>nerren</i> ‘to nourish, to feed, to heal’, <i>gi-nesan</i> ‘to be saved’. Perhaps also: Sanskrit <i>násate</i> ‘to approach, to resort to, to join, to copulate; to be crooked or

		fraudulent'; Greek νέομαι 'to come back, to return'.
<b>nirušae</b> (< * <i>ner-</i> ) 'rapidly, promptly'	* <i>ner-/*nor-/*nr-</i> 'to move quickly or rapidly' (Mann 1984—1987:854)	Sanskrit <i>nṛtyati</i> 'to dance (about), to act on the stage', <i>nṛtū-h</i> 'dancing, gesticulating, lively, active'; Lithuanian <i>niršti</i> 'to rage, to fume, to chafe, to fret', <i>nirtinti</i> 'to excite or provoke anger; to make furious', <i>nirtūs</i> 'irascible, wrathful', <i>nérteiti</i> 'to rage, to rave; to be angry', <i>nirti</i> 'to scud, to rush'
<b>nu-(ú/u)-i-</b> (< * <i>new-</i> ) 'ear' (Catsanicos 1996)	* <i>new-/*now-/*nu-</i> 'to discern, to discover, to get to know' (extended forms: (A) * <i>new-s-/*now-s-/*nu-s-</i> ; (B) * <i>new-ks-/*now-ks-/*nu-ks-</i> ) (Pokorny 1959:768—769; Walde 1927—1932.II:325; Mann 1984—1987:840)	Gothic <i>bi-niuhsjan</i> 'to spy out'; Old Icelandic <i>nýsa</i> 'to pry, to peer', <i>njósna</i> 'spying, scouting, looking out', <i>njósna</i> 'to spy, to seek to find out'; Old English <i>nēosan, nēosian</i> 'to investigate, to inspect'; Old Saxon <i>niusian, niusōn</i> 'to investigate'; Old High German <i>niesen</i> 'to try, to probe, to discern'; Russian <i>njúxat'</i> [нюхать] 'to smell'
<b>pa/wa-ah-</b> (< * <i>bheH<sub>2</sub>-</i> ) 'to destroy' (Catsanicos 1996)	* <i>bheH<sub>2</sub>-</i> (> * <i>bhā-</i> ) 'to strike'; extended forms: (A) * <i>bhā-t-</i> and (B) * <i>bhā-w-</i> (Pokorny 1959:111—112 and 112; Walde 1927—1932.II:125—127; Mann 1984—1987:67, 68, and 68—69)	(A) * <i>bhā-t-</i> 'to strike': Latin <i>battuō, bātuō</i> 'to beat, to knock' (Gaulish loanword); Welsh <i>bathu</i> 'to coin money' (B) * <i>bhā-w-</i> 'to strike': Latin <i>fūstis</i> 'stick, staff, cudgel, club'; Old Icelandic <i>bauta</i> 'to beat, to chase'; Old English <i>bēatan</i> 'to beat'
<b>pala</b> (< * <i>pol-</i> ) 'canal'	* <i>pel-/*pol-/*pl-</i> 'to flow'; extended form: * <i>pl-ew-/*pl-ow-/*pl-u-</i> (Pokorny 1959:798—801 and 835—837; Walde 1927—1932.II:54—55 and II:94—95; Mann 1984—1987:954, 956, 958, 959, 959—960, 960, 960—961, 961, 962—963, 963, 964)	Sanskrit <i>pluti-h</i> 'overflowing, a flood'; Old Icelandic <i>fjót</i> 'river, lake', <i>flóð</i> 'flood, inundation'; Old English <i>flēot</i> 'estuary, mouth of river; bay; sea, water', <i>flōd</i> 'flowing, stream; flood, deluge', <i>flōde</i> 'channel, gutter'; Middle High German <i>vlieʒ</i> 'stream,

		current', <i>vliezen</i> 'to flow, to swim'; Czech <i>prů-plav</i> 'canal'
<b>par(i)ili</b> (< * <i>por-</i> ) 'crime'; <b>pa-a-r-</b> (< * <i>por-</i> ) 'to be offended, to be angry' (Catsanicos 1996)	* <i>per-/*por-/*pr-</i> '(vb.) to harm, to endanger; (n.) harm, danger' (Mann 1984—1987: 927)	Latin <i>periculum</i> 'danger, peril, hazard'. Lengthened-grade in Germanic: Gothic <i>fērja</i> 'spy'; Old Icelandic <i>fár</i> 'bale, harm, mischief; dangerous illness; fraud, false dealing', <i>fāra</i> 'to slight, to taunt, to offend'; Old English <i>fēr</i> '(sudden) danger, calamity, attack'; Old Saxon <i>fār</i> 'ambush'; Old High German <i>fāra</i> 'danger, ambush'
<b>pitt-</b> (< * <i>pet-</i> ) 'to go back' (Diakonoff 1971)	(A) * <i>pet-/*pot-</i> 'to go to or towards; to go against; to go back' (apparently only preserved in Latin in these meanings) (Ernout—Meillet 1979:503—504)  (B) * <i>pot-i</i> 'towards, against, back' (Pokorny 1959:842; Walde 1927—1932.II:77; Mann 1984—1987:981)	(A) Latin <i>petō</i> 'to make for, to go to; to attack, to assail; to seek, to strive after, to endeavor to obtain; to ask for, to beg, to beseech, to request, to entreat; to fetch, to derive'  (B) Avestan <i>paiti</i> '(verb prefix) towards, against, back; (prep.) to, upon, for, with'; Old Persian <i>patiy</i> '(adv.) thereto, again; (prep.) against'; Greek (Homeric) <i>ποτί</i> 'to, toward, upon, against' (influenced by <i>πρός</i> , <i>πρότι</i> )
<b>pud-</b> (< * <i>bhewdh-/*bhowdh-/*bhudh-</i> ) 'to announce'; <b>pu-ú-ta-an-k-</b> (< * <i>bhewdh-/*bhowdh-/*bhudh-</i> ) 'to announce, to denounce' (Catsanicos 1996)	* <i>bhewdh-/*bhowdh-/*bhudh-</i> 'to be or become aware of; to prompt, to arouse, to exhort' (Pokorny 1959:150—152; Walde 1927—1932.II:147—148; Mann 1984—1987:75)	Sanskrit <i>bóhati</i> 'to wake, to wake up, to be awake; to perceive, to notice, to understand, to be or become aware of or acquainted with; to think of; to know to be, to recognize as; to deem, to consider, to regard as', <i>buddhá-h</i> 'awakened, enlightened, learned, understood, known', <i>buddhi-h</i> 'intelligence, reason, mind, discernment, judgment', <i>bodhi-h</i> 'perfect knowledge or wisdom, the illumined or enlightened mind', <i>bodhá-h</i>

		‘perception, knowledge, thought, understanding, intelligence’; Greek πεύθομαι ‘to learn of’; Lithuanian <i>budėti</i> ‘to be awake’; Old Church Slavic <i>bəděti</i> ‘to be awake’, <i>buditi</i> ‘to awaken’, <i>bədrə</i> ‘watchful’; Gothic * <i>biudan</i> in: <i>ana-biudan</i> ‘to order, to command’, <i>faur-biudan</i> ‘to forbid’; Old English <i>bēodan</i> ‘to offer’, <i>on-bēodan</i> ‘to announce, to tell; to command’, <i>for-bēodan</i> ‘to forbid’; Old Saxon <i>biodan</i> ‘to order, to offer’; Old High German <i>biotan</i> ‘to order, to offer’, <i>far-biotan</i> ‘to forbid’
<b>purame</b> (< * <i>bhr</i> -) ‘servant, slave’	* <i>bher-/*bhor-/*bhr-</i> ‘to bear, to carry’ (Pokorny 1959:128—132; Walde 1927—1932.II: 153—157; Mann 1984—1987:72, 73, 74, 74—75, 75, 94, 95, 114, 115—116, 116, 125)	Sanskrit <i>bhrtya-h</i> ‘a servant, a dependent’; Pāli <i>bhaṭa-</i> (< <i>bhrtya-</i> ) ‘hireling, servant, soldier’; Bengali <i>bhaṛ</i> ‘soldier, servant’; Lithuanian <i>bérnas</i> ‘lad, boy; hired man, farm-hand’
<b>pu/wu-ú-ru</b> (< * <i>bhr</i> -) ‘strong’ (Catsanicos 1996)	* <i>bher-gh-/*bhor-gh-/*bhr-gh-</i> ‘(adj.) high, tall; great, strong; (n.) mountain, hill’ (Pokorny 1959:140—141; Walde 1927—1932.II:172—174; Mann 1984—1987:74 and 125; Kloekhorst 2008:636—637)	Hittite <i>pár-ku-uš</i> ‘high’; Sanskrit <i>bṛhánt-</i> ‘high, tall, great, strong’; Avestan <i>bərəzant-</i> ‘great, lofty’; Armenian <i>barjr</i> ‘high’; Welsh <i>bre</i> ‘hill’; Gothic * <i>bairgs</i> ‘mountain’, <i>baurgs</i> ‘city, town’; Old Icelandic <i>bjarg</i> , <i>berg</i> ‘mountain, rock’, <i>borg</i> ‘stronghold, fortification, castle; fortified town, city’; Old English <i>beorh</i> , <i>beorg</i> ‘hill, mountain’, <i>burg</i> , <i>bur(u)h</i> ‘fortified place, (fortified) town, city’; Old High German <i>berg</i> ‘mountain’, <i>burg</i> ‘fortified place, castle, city’; Tocharian B <i>pärkare</i> ‘long’; Greek πύργος ‘tower’ (pre-

		Greek loan). Germanic loans in: Latin <i>burgus</i> ‘castle, fort, fortress’; Old Irish <i>brugh</i> , <i>brog</i> , <i>borg</i> ‘castle’.
<b>-ra</b> (< * <i>H<sub>4</sub>r</i> ) comitative singular suffix: ‘together with’	* <i>H<sub>4</sub>er</i> /* <i>H<sub>4</sub>r</i> (> * <i>ar</i> /* <i>r</i> ) ‘and, also’ (Pokorny 1959:62; Walde 1927—1932.I:77 * <i>ar</i> (: * <i>are</i> , * <i>re</i> ?), * <i>r</i> ; Mann 1984—1987: 31 and 1105	Greek ἄρα, ἀρ, ρα, ἄρα ‘then, straightway, at once’; Lituanian <i>ir</i> ‘and; too, also’, <i>ar</i> ‘whether, or’; Latvian <i>ar</i> ‘with; also’; Tocharian B <i>ra</i> ‘also’
<b>sà-am-m-</b> (< * <i>tsom-</i> ) ‘to rip, to tear apart’ (intensive <b>sà-am-ma-la-aš-d-</b> ) (Catsanicos 1996)	* <i>tem-/*tom-/*tm-</i> ‘to cut, to chop; to cut apart, to cut asunder’ (earlier * <i>tsem-</i> /* <i>tsom-/*tsm-</i> ); extended form: * <i>tem-d-/*tom-d-/*tm-d-</i> (> * <i>tend-/*tond-/*tnd-</i> ) (Pokorny 1959:1062—1063; Walde 1927—1932.I:719—720; Mann 1984—1987:1377—1378, 1378, and 1411)	Greek τέμνω ‘to cut, to hew; to wound; to cut up, to cut to pieces; to sacrifice; to cut or chop up; to divide, to cut asunder’, τόμος ‘a cut, a slice’; Latin <i>tondeō</i> ‘to shave, to shear, to clip’; Old Irish <i>tennid</i> (< * <i>tendn-</i> ) ‘to cut open’
<b>sí-il<sub>5</sub>-ma-n-</b> (< * <i>dzel-</i> ) ‘to break, to destroy’ (Catsanicos 1996)	* <i>del-/*dol-/*dl-</i> ‘to split, to cleave’ (earlier * <i>dzel-/*dzol-/*dzl-</i> ) (Pokorny 1959:194—196; Walde 1927—1932.I: 809—812; Mann 1984—1987: 131—132, 132, and 140)	Sanskrit <i>dālāyati</i> ‘to crack, to fly open, to split open’, <i>dala-m</i> ‘a piece torn or split off, a fragment’; Latin <i>dolō</i> ‘to hew with an ax’; Lithuanian <i>dalis</i> ‘part, share, portion’
<b>*ša/eht-</b> (< * <i>seH<sub>2</sub>-t-</i> ) ‘one-half’ (Wilhelm 2004a:115)	* <i>siH<sub>2</sub>-</i> (> * <i>sē-</i> ): (A) * <i>sē-</i> ‘separately, apart’; (B) * <i>sē-t-</i> ‘division, section’; (C) * <i>sē-mi-</i> ‘half’ (Pokorny 1959:905—906; Walde 1927—1932.II:493; Mann 1984—1987:1126 and 1133—1134)	(A) * <i>sē-</i> ‘separately, apart’ > Latin <i>sēd</i> , <i>sē</i> ‘without; apart’  (B) * <i>sē-t-</i> ‘division, section’ > Avestan <i>hāti-</i> ‘division, section’; Latvian <i>sēta</i> ‘hedge, section, division, staff’  (C) * <i>sē-mi-</i> ‘half’ > Sanskrit (indeclinable) <i>sāmi</i> ‘half, incompletely, imperfectly, partially’; Greek (prefix) ἡμί- ‘half’; Latin (prefix) <i>sēmi-</i> ‘half’
<b>šahri</b> (< * <i>seH<sub>2</sub>-r-</i> ) ‘garden, orchard’	* <i>siH<sub>2</sub>-</i> (> * <i>sē-</i> ) ‘to throw, to scatter’ > ‘to sow, to plant’ (Pokorny 1959:889—891;	Latin <i>sēmen</i> ‘seed’, <i>serō</i> (< * <i>sisō</i> ) ‘to sow, to plant’; Gothic <i>saian</i> ‘to sow’; Old

	Walde 1927—1932.II:459—463; Mann 1984—1987:1122, 1126, 1133, 1134; Kloekhorst 2008:396—399)	Icelandic <i>sá</i> ‘to sow; to throw, to scatter’, <i>sáð</i> ‘seed, grain, crop’, <i>sæði</i> ‘seed, (in pl.) crops’; Old English <i>sāwan</i> ‘to sow, to strew seeds, to plant’, <i>sād</i> ‘seed (of plants and animals); fruit, crop; growth; sowing; source; progeny, posterity’; Old High German <i>sāen</i> , <i>sāwen</i> ‘to sow’, <i>sāt</i> ‘seed’, <i>sāmo</i> ‘seed’; Lithuanian <i>séju</i> , <i>séti</i> ‘to sow’, <i>sémens</i> , <i>sémenys</i> ‘flax seed’, <i>sélena</i> ‘husk of a seed’; Old Church Slavic <i>sějо</i> , <i>saěti</i> (also <i>sějati</i> ) ‘to sow’, <i>sěmę</i> ‘seed’; (?) Hittite <i>iš-hu-u-wa-a-i</i> ‘to shed, to throw, to scatter, to sow (seeds), to pour’
šal- <b>h</b> -, šal- <b>h</b> -u-l- (< *sol- <i>H</i> <sub>2</sub> -) ‘to listen, to understand’ (Catsanicos 1996)	* <i>sel(H)</i> -/* <i>sol(H)</i> -/* <i>sl(H)</i> - ‘to listen, to understand’ (only attested in Celtic)	(reduplicated) * <i>se-sl-ow-</i> > Breton <i>selaou</i> ‘to listen’ (Middle Breton <i>sezlou</i> ); Cornish <i>golsowas</i> , <i>goslow</i> ‘to listen’ (Buck 1949:1038, no. 15.42)
šal-li, ša-a-al-li (< *sal-) ‘rampage’ (Catsanicos 1996)	* <i>sal-</i> (also * <i>sel-</i> ) ‘to move quickly; to spring, to leap, to jump’ (Pokorny 1959:899; Walde 1927—1932.II:505; Mann 1984—1987:1109, 1110, 1110—1111, and 1124; Mallory—Adams 1997:323)	Latin <i>saliō</i> ‘to spring, to leap, to jump, to bound’, <i>saltus</i> ‘a jump’, <i>saltō</i> ‘to dance, especially with pantomimic gestures’; Greek ἄλλομαι ‘to spring, to leap, to jump’, ἄλμα ‘spring, leap, bound’, ἄλσις ‘a leaping’; Tocharian A/B <i>säl-</i> ‘to jump, to leap’
ša-wu-u-ši (< *sow-) ‘great, august’ (Catsanicos 1996)	* <i>sew-</i> /* <i>sow-</i> /* <i>su-</i> ‘to swell, to expand’; extended form: * <i>sw-el-</i> ‘to swell, to expand’ (Mann 1984—1987:1345)	Proto-Germanic * <i>swellan</i> ‘to swell’ > Gothic <i>uf-swalleins</i> ‘swollen, puffed up’ (< causative * <i>swalljan</i> ‘to make swell’); Old Icelandic <i>svella</i> ‘to swell’; Old English <i>swellan</i> ‘to swell’, <i>swyle</i> ‘swelling’; Old Saxon <i>swellan</i> ‘to swell’, <i>swil</i> ‘swelling’; Old High German <i>swellan</i> ‘to

		swell', (m.) <i>swilo</i> , (n.) <i>swil</i> (< * <i>swiliz</i> ) 'callous swelling, welt'
šini (< * <i>si-</i> ) 'you' (?)	*-si (< *-s plus deictic particle *-i) second person singular primary verb ending, *-s second person singular secondary verb ending (Beekes 1995:232—234; Brugmann 1904:590; Burrow 1973:306—314; Clackson 2007:124, 125, and 127; Fortson 2004:84—85; Szemerényi 1996:233—236)	Hittite second person singular <i>mi</i> -conjugation: -ši, preterit second person singular of thematic verbs: -š; Sanskrit (primary) -si, (secondary) -s; Avestan (primary) -si, (secondary) -s; Greek (primary) -σι, (secondary) -ς; Latin -s; Gothic -s; Old Russian -šь [-шь]; Lithuanian -si
ši-(i)-ir- (< * <i>ser-</i> ) 'to be equal; to make equal, to count' (Catsanicos 1996); ši-i-ri (< * <i>ser-</i> ) 'number' (Catsanicos 1996)	* <i>ser-/*sor-/*sr-</i> 'to arrange in order' (Pokorny 1959:911; Walde 1927—1932.II:499—500; Mann 1984—1987:1131 and 1281)	Latin <i>serō</i> 'to join together, to put in a row, to connect', <i>seriēs</i> 'row, succession, chain, series'; Greek εἵρω 'to fasten together in rows, to string'; Old Irish <i>sern(a)id</i> 'to spread, to arrange', <i>sreth</i> 'row, series'
ši-ra-t- (< * <i>ser-</i> ) 'to tell, to narrate' (Catsanicos 1996)	* <i>ser-/*sor-/*sr-</i> 'to arrange in order' (Pokorny 1959:911; Walde 1927—1932.II:499—500; Mann 1984—1987:1131 and 1281)	Latin <i>sermō</i> 'talk, discourse, conversation' (cf. Ernout—Meillet 1979:617: "Sermō est rattaché à <i>serō</i> , <i>seriēs</i> par les anciens, et il n'y a pas raison de douter du rapprochement, bien qu'aucune langue n'offre pour la racine * <i>ser-</i> le même développement de sens...")
šiye ([Kizzuwatna] šiu, [Mari] šiwe) (< * <i>sew-</i> ) 'water, river'	* <i>sew-/*sow-/*su-</i> 'to wet, to moisten, to flow'; extended form: * <i>swel-/*sul-</i> '(vb.) to wet, to moisten, to flow; (n.) liquid, moisture' (Pokorny 1959:912—913; Walde 1927—1932.II:468—469; Mann 1984—1987:1136, 1334, and 1334—1335). Note: Mann (1984—1987:1136) derives Albanian <i>ujë</i> 'water' from Proto-Indo-European * <i>seu̥s</i> 'flow, movement'.	(A) * <i>sew-/*sow-/*su-</i> 'to wet, to moisten, to flow': Greek υει 'to rain', υετός 'rain'; Tocharian B <i>su-</i> 'to rain', <i>swese</i> 'rain'; Old Prussian <i>soye</i> 'rain'; Old Icelandic <i>söggr</i> 'dank, wet'; Old English <i>seaw</i> 'juice, liquid'  (B) * <i>swel-/*sul-</i> '(vb.) to wet, to moisten, to flow; (n.) liquid, moisture': Sanskrit <i>súra</i> 'spirituous liquor, wine'; Greek υλη, υλις (υλις) 'mud,

		slime', <i>úλιζω</i> 'to filter, to strain'; Old Icelandic <i>sulla</i> 'to swill'; Old English <i>swillan</i> , <i>swilian</i> 'to flood with water so as to wash or rinse, to drink in large quantities', <i>sol</i> 'mud, wet sand', <i>syl</i> 'wallowing place, miring place', <i>sylian</i> 'to make muddy or dirty, to pollute'; Old High German <i>sol</i> 'mud, puddle', <i>bi-sulen</i> 'to wallow in mud, mire'; Lithuanian <i>sulà</i> 'sap'; Old Prussian <i>sulo</i> 'curdled milk'
šui (< *so) 'all; everyone, everybody'	*so 'this, that' (Pokorny 1959: 978—979; Walde 1927—1932.II:509; Mann 1984—1987:1250)	Sanskrit (m. sg.) <i>sá(-h)</i> , (f. sg.) <i>sā</i> demonstrative pronoun; Greek (m. sg.) <i>ó</i> , (f. sg.) <i>ή</i> demonstrative pronoun and definite article; Old Icelandic <i>sá</i> , <i>sú</i> 'that'; Tocharian B <i>se(-)</i> demonstrative pronoun
šull- (< *sl-) 'to bind' (< 'to take hold of, to hold tight') (Diakonoff 1971)	*sel-/*sol-/*sl- 'to grasp, to seize, to take hold of' (Pokorny 1959:899; Walde 1927—1932.II:504—505; Mann 1984—1987:1125)	Greek <i>ἐλεῖν</i> 'to take with the hand, to grasp, to seize', <i>ἔλωρ</i> 'booty, spoil, prey'; Old Irish <i>sellaim</i> 'to take', <i>selb</i> 'possession'; Welsh <i>helw</i> 'possession, ownership'
šummi (< *sm-) 'with, on behalf of'	*sem-/*sm- 'together with' (Pokorny 1959:902—905; Walde 1927—1932.II:488—492; Mann 1984—1987:1125, 1230—1231, and 1231)	Sanskrit (reduced-grade) <i>sa-</i> (< *sm-) in <i>sa-kṛt</i> 'once', (full-grade) <i>sám</i> 'with, along with, together with, together, altogether'; Latin <i>sem-</i> in <i>semper</i> 'always'; Lithuanian <i>sam-</i> , <i>sán-</i> , <i>sq-</i> (as in <i>sq-junga</i> 'league, union') 'with'; Old Prussian <i>sen</i> ( <i>sen-/san-</i> ) 'with'. This stem also provides the basis for the Greek, Armenian, and Tocharian numeral '1': Greek <i>εἷς</i> [< *sems], <i>σμία</i> ; Armenian <i>mi</i> ; Tocharian A <i>sas</i> , B <i>še</i> .
šuni (< *sŋ- or <i>H<sub>I</sub>sŋ-</i> ) 'soul' (?)	(A) * <i>sen-</i> , *- <i>sen</i> 'self' (Mann 1984—1987:1127); or	(A) Old Irish <i>-sean</i> , <i>-san</i> 'self'; Old Church Slavic

	(B) * <i>H<sub>1</sub>sen(t)</i> -/* <i>H<sub>1</sub>sŋ(t)</i> - (> * <i>sen(t)</i> -/* <i>sŋ(t)</i> -) ‘being, living creature’ (< * <i>H<sub>1</sub>es-</i> [> * <i>es</i> -] ‘to be, to exist’) (Pokorny 1959: 340—342; Walde 1927—1932.I:160—161; Mann 1984—1987:249, 250, 251, 251—252, 252—253, 254, 1238, and 1247)	(clitic) <i>se</i> ‘self’  (B) Sanskrit <i>sát</i> (< * <i>sŋt</i> -) ‘(adj.) being, existing, being present, happening, occurring; (n.) a being; (pl.) beings, creatures’, <i>sat-tvá-</i> ‘being, existence, entity, reality’
šu-ú-r- (< * <i>sŋr</i> -) ‘to kill (a small animal)’ (Catsanicos 1996)	(A) * <i>ser(H)</i> -/* <i>sor(H)</i> -/* <i>sŋr(H)</i> - ‘to split, to rip apart, to tear asunder’ (Kloekhorst 2008: 727—729);  (B) extended form: * <i>ser-gh</i> -/* <i>sor-gh</i> -/* <i>sŋr-gh</i> - ‘to cut, to strike, to slay, to wound’ (Mann 1984—1987:1249)	(A) Hittite (3rd singular pres.) <i>šar-ra-i</i> ‘to separate, to divide, to break’  (B) Icelandic <i>sarga</i> ‘to hack (with a blunt instrument)’; Swedish <i>sarga</i> ‘to wound, to graze, to tear’; Old Church Slavic <i>sragъ</i> ‘awful’; Russian <i>sražát'</i> [сражать], <i>srazít'</i> [сразить] ‘to slay, to strike down, to smite’
šuram- (< * <i>sŋr</i> -) ‘to hurry’ (?); šu-úr-r- (< * <i>sŋr</i> -) ‘to go, to walk’ (Catsanicos 1996)	* <i>ser</i> -/* <i>sor</i> -/* <i>sŋr</i> - ‘to move quickly, to flow’ (Pokorny 1959:909—910; Walde 1927—1932.II:497—498; Mann 1984—1987:1131)	Sanskrit <i>sáratí</i> ‘to run, to flow, to move’; Greek ὥρη ‘onset, rush’; Middle Irish <i>sirid</i> (< * <i>sēr</i> -) ‘to wander through’
-ta (< * <i>dě</i> /* <i>dō</i> ) allative singular suffix: ‘to’	* <i>dě</i> /* <i>dō</i> ‘to, towards; from’ (Pokorny 1959:181—183; Walde 1927—1932.I:769—771; Mann 1984—1987:134 and 152)	Hittite <i>-da</i> in: <i>anda</i> ‘in, into’; Latin <i>-dō</i> in: <i>quan-dō</i> ‘when; when?’, (archaic) <i>en-do</i> , <i>in-du</i> ‘into’; <i>dē</i> ‘down from, away from’; Old Irish <i>do</i> , <i>du</i> ‘to’, <i>de</i> ‘from’; Old English <i>tō</i> ‘to’; Lithuanian <i>da-</i> ‘up to’; Old Church Slavic <i>do</i> ‘up to, until’
tagi (< * <i>dhaǵh</i> -) ‘beautiful’; tagul- ‘to become beautiful’	* <i>dhaǵh</i> - ‘beautiful, fine, good, harmonious, abundant’ (Mann 1984—1987:176)	Gaulish <i>dago-</i> ‘good’; Old Irish <i>dag-</i> ‘good’; Welsh <i>da</i> ‘good’; Breton <i>da</i> ‘good’; Cornish <i>da</i> ‘good’
tali (< * <i>dhal</i> -) ‘tree, wood’	* <i>dhal</i> - ‘to bloom; to be leafy, lush’ (Pokorny 1959:234; Walde 1927—1932.I:825—826; Mann 1984—1987:176 and 177)	Armenian <i>dalar</i> ‘green, fresh’; Greek θάλλω ‘to bloom, to abound, to be luxuriant (of fruit-trees)’, θαλερός ‘fresh, blooming’, θαλλός ‘a young

		shoot, a young branch'; Welsh <i>dail</i> 'foliage'; Old Cornish <i>delen</i> 'leaf'
<b>talmi</b> (< * <i>dol-m-</i> ) 'great, big'; <b>ta-al-ma-aš-t-</b> (< * <i>dol-m-</i> ) 'to celebrate, to magnify' (Catsanicos 1996)	* <i>dol-/*dol-/*dl-</i> 'to stretch, to extend, to lengthen'; extended forms: * <i>dl-H-gho-</i> (> * <i>dłgho-</i> ) 'long', * <i>dl-e-Hgh-</i> (> * <i>dlēgh-</i> ) '(vb.) to stretch, to extend, to lengthen; (adj.) long; (n.) length' (Pokorny 1959:196—198; Walde 1927—1932.I: 812—813; Mann 1984—1987:150, 151, 153; Kloekhorst 2008:819—820)	Sanskrit <i>dīrghá-h</i> 'long, tall, deep', <i>drāghmán-</i> , <i>drāghimán-</i> 'length', <i>drāghate</i> 'to lengthen, to stretch'; Greek δολιχός 'long', ἐνδελεχής 'continuous, perpetual'; Hittite (nom. pl.) <i>da-lu-ga-e-eš</i> 'long', <i>da-lu-ga-aš-ti</i> 'length', (3rd sg. pres.) <i>ta-lu-ki-iš-zi</i> , <i>ta-lu-kiš-zi</i> , 'to become long'; Old Church Slavic <i>dlъgъ</i> 'long', <i>dlъžq</i> , <i>dlъžiti</i> 'to extend'
<b>tan-</b> (< * <i>dheH<sub>1</sub>-n-</i> ) 'to do'	* <i>dheH<sub>1</sub>-</i> (> * <i>dhē-</i> ) '(vb.) to put, to place, to set; to do; (n.) thing done, deed; setting, placing, putting' (Pokorny 1959:235—239; Walde 1927—1932.I:826—829; Mann 1984—1987:178, 180—181, 181, 182, 183, 186, 187, 188, 189, and 197; Kloekhorst 2008:806—809)	Sanskrit <i>dá-dhā-ti</i> 'to put, to place, to set, to lay (in or on); to appoint, to establish, to constitute'; Greek τί-θη-μι 'to set, to put, to place'; Latin <i>faciō</i> 'to make, to do' (perfect <i>fēcī</i> 'did'); Lithuanian <i>dėti</i> 'to lay, to put, to place'; Old Church Slavic <i>děti</i> 'to put, to place'; Tocharian A <i>tā-</i> , <i>tās-</i> , <i>tās-</i> , <i>tas-</i> , <i>cas-</i> , B <i>tās-</i> , <i>tās-</i> , <i>tes-</i> , <i>tātt-</i> 'to put, to place, to set'; Hittite <i>da-a-i</i> 'to put, to place'
<b>tapš-</b> (< * <i>tap-s-</i> ) 'low'; <b>tapšuh-</b> (< * <i>tap-s-</i> ) 'to cut down, to overthrow'	* <i>tap-</i> 'to press down, to bring down' (Pokorny 1959:1056; Walde 1927—1932.I:705; Mann 1984—1987:1368—1369)	Greek ταπεινός 'lying low; brought down, humbled, submissive; of low rank, lowly, mean'; Old Icelandic <i>þeppa</i> 'to stamp', <i>þóf</i> 'a beating or thickening of cloth', <i>þófari</i> 'a stamper', <i>þæfa</i> '(vb.) to beat, to stamp cloth; (n.) a stamping', <i>þæfa</i> 'to press'
<b>tarmani</b> (< * <i>dor-m-</i> ) '(water) spring'	* <i>der-/*dor-/*dr-</i> 'to run, to flow'; extended forms: * <i>dr-eH<sub>2</sub>-</i> (> * <i>drā-</i> ); * <i>dr-ew-</i> ; * <i>dr-em-</i> (Pokorny 1959:204—206; Walde 1927—1932.I:	Sanskrit <i>dráti</i> 'to run, to hasten', <i>drámati</i> 'to run about, to roam, to wander', <i>drávati</i> 'to run, to hasten', <i>dravá-h</i> 'running, flowing', <i>dravantī</i>

	795—797; Mann 1984—1987:158, 159, 160)	‘river’, <i>druta-h</i> ‘speedy, swift’; Greek δρημός ‘flight, running away’, (aor.) ἔδραμον ‘to run, to move quickly’, δρόμος ‘course, running, race’; Gothic <i>trudan</i> ‘to tread, to step’; Old Icelandic <i>troða</i> ‘to tread’; Old English <i>tredan</i> , ‘to tread, to step on, to trample’, <i>treddian</i> ‘to tread, to walk’, <i>trod</i> (f. <i>trodu</i> ) ‘track, trace’; Old Saxon <i>tredan</i> ‘to tread’; Old High German <i>tretan</i> ‘to tread’, <i>trottōn</i> ‘to run’
<b>taše</b> (< * <i>doH<sub>4</sub>-s-</i> ) ‘gift’ (?); <b>ta-šu-l-</b> (< * <i>doH<sub>4</sub>-s-</i> ) ‘to give, to grant’ (Catsanicos 1996)	* <i>doH<sub>4</sub>-</i> (> * <i>dō-</i> ) ‘to give’ (Pokorny 1959:223—226; Walde 1927—1932.I:814—816; Mann 1984—1987:144, 146—147, 152, 154, 155, 156, 157, 158; Mayrhofer 1956—1980.II:13—14; Sturtevant 1942:67)	Sanskrit <i>dá-dā-ti</i> ‘to give, to bestow, to grant, to yield, to impart, to present, to offer to, to place, to put, to apply (in medicine), to permit, to allow’; Greek δί-δω-μι ‘to give, to grant, to offer’; Latin <i>dō</i> ‘to give’; Lithuanian <i>díoti</i> ‘to give’; Old Church Slavic <i>dati</i> ‘to give’
<b>tea</b> (< * <i>te(w)-</i> ) ‘many’; <b>teuna</b> (< * <i>tew-n-</i> ) ‘in high numbers, many’; <b>teunae</b> (adv.) ‘much’	* <i>tew-/*tow-/*tu-, *tewH-/*towH-/*tuH-</i> (> * <i>tū-</i> ) ‘to swell’ (Pokorny 1959:1080—1085; Walde 1927—1932.I:706—713; Mann 1984—1987:1389—1390, 1456, 1456—1457)	Sanskrit <i>tavas-</i> ‘strong’; Latin <i>tūber</i> ‘swelling, protuberance’, <i>tōtus</i> (< * <i>towetos</i> ) ‘all’, <i>tumeō</i> ‘to swell, to be swollen’; Lithuanian <i>tumēti</i> ‘to become thick’, <i>taukai</i> ‘(animal) fat’, <i>tūlas</i> ‘many, many a one’, <i>tvānas</i> ‘multitude’; Old Prussian (adv.) <i>tūlan</i> ‘much’
<b>Teššub</b> (< * <i>dei- + *subh-</i> ) the Hurrian god of sky and storm	(A) * <i>dei-/*doi-/*di-</i> ‘to shine, to be bright’ (Pokorny 1959: 183—187; Walde 1927—1932.I:772—774; Mann 1984—1987:136, 148, 149, 150; Kloekhorst 2008:763—764, 764, 765, and 766—767). Derivatives include the following:	(A) Sanskrit <i>devá-h</i> ‘(n.) a deity, god; (adj.) heavenly, divine’, <i>dídeti</i> ‘to shine, to be bright; to shine forth, to excel, to please, to be admired’, <i>dyáuh</i> ‘heaven, sky, day’, <i>divá-h</i> ‘heaven, sky, day’, <i>divyá-h</i> ‘divine, heavenly, celestial; supernatural, wonderful, magical; charming,

	<p>*<i>deiwas</i>, -<i>yos</i> ‘divine, inspired’;</p> <p>*<i>deyō</i> (*<i>dīdēmi</i>) ‘to appear’;</p> <p>*<i>dītis</i> ‘brightness, daytime’;</p> <p>*<i>diwas</i>, -<i>om</i> (*<i>dyu-</i>) ‘sky, day’;</p> <p>*<i>dīwyō</i> ‘to shine, to light up’;</p> <p>*<i>diwyos</i> ‘heavenly, divine’;</p> <p>*<i>dyēw-</i> ‘to shine, to burn’;</p> <p>*<i>dyēws</i> (obl. *<i>diw-</i>) ‘god, sky’;</p> <p>*<i>dinos</i>, -<i>om</i>, -<i>ā</i>, -<i>is</i> ‘day, daytime’.</p> <p>(B) *<i>sewbh-</i>/<i>sowbh-</i>/<i>subh-</i> ‘(vb.) to storm, to rage; (n.) fury, storm’ (extended form of *<i>sew-</i>/<i>sow-</i>/<i>su-</i> ‘to seethe, to rage, to boil’) (Pokorny 1959:914—915; Walde 1927—1932.II:471—472; Mann 1984—1987:1134; Mallory—Adams 1997:76—77)</p>	<p>beautiful, agreeable’, <i>dīna-h</i> ‘day’; Greek δῖος ‘heavenly; noble, excellent; divine, marvelous’; Ζεύς ‘Zeus, the sky-god’; Armenian <i>tiw</i> ‘day’; Latin <i>diēs</i> ‘day’, <i>deus</i> ‘god’; Old Irish <i>die</i> ‘day’; Old Icelandic <i>tívor</i> (pl. <i>tívar</i>) ‘god’; Old English <i>Tīw</i> name of a deity identified with Mars; Lithuanian <i>dienā</i> ‘day’, <i>diēvas</i> ‘god’; Old Church Slavic <i>dīnē</i> ‘day’; Hittite (dat.-loc. sg.) <i>šiwalli</i> ‘day’, (gen. sg.) <i>ši-(i-)ú-na-aš</i> ‘god’; Luwian (acc. pl.) <i>ti-wa-ri-ya</i> ‘sun’, (nom. sg.) <i>Ti-wa-az</i> name of the sun-god (= Sumerian <sup>4</sup>UTU, Akkadian <i>ŠAMŠU</i>, Hittite <i>Ištanu-</i>); Palaic (nom. sg.) <i>Ti-ya-az(-)</i> name of the sun-god; Hieroglyphic Luwian <i>SOL-wa/i-za-sa</i> (*<i>Tiwarts</i> or *<i>Tiwazas</i>) name of the sun-god</p> <p>(B) Lithuanian <i>siaubiu</i>, <i>siaubti</i> ‘to storm, to rage, to fume’, <i>siaubas</i> ‘fury, squall’</p>
<b>ti-i</b> (< * <i>dheH<sub>1</sub>-</i> ) ‘to speak’ (Diakonoff 1971); <b>tiwe</b> (< * <i>dheH<sub>1</sub>-w-i</i> ) ‘word, thing’	* <i>dheH<sub>1</sub>-</i> (> * <i>dhē-</i> ) ‘to say, to speak’ (Mann 1984—1987: 140 and 182; Kloekhorst 2008:857—858)	Hittite <i>te-iz-zi</i> ‘to say, to speak’; Old Church Slavic <i>děti</i> ‘to say, to speak’; Latvian <i>dēvēju</i> ‘to declare, to announce’
<b>ti-l-</b> (< * <i>dhel-</i> ) ‘to destroy’ (Catsanicos 1996)	* <i>dhel-</i> / <i>dhol-</i> / <i>dhl-</i> ; extended form: * <i>dhel-gh-</i> / <i>dhol-gh-</i> / <i>dhl-gh-</i> ‘to gash, to wound, to slay’ (Pokorny 1959:247; Walde 1927—1932.I:866; Mann 1984—1987:192)	Old Icelandic <i>dolg</i> ‘enmity’; Old English <i>dolg</i> ‘wound, scar’; Old Frisian <i>dolg</i> ‘wound’; Low German <i>daljen</i> , <i>dalgen</i> ‘to slay’; Middle Dutch <i>dolk</i> ‘wound’; Old High German <i>tolc</i> , <i>tolg</i> , <i>dolg</i> ‘wound’
<b>ti-me-er-re-e</b> (< * <i>dhem-</i> )	* <i>dhem-</i> / <i>dhom-</i> / <i>dhm-</i> ‘to	Old Icelandic <i>dimmr</i> ‘dim,

‘black’ (Catsanicos 1996)	become dark, to make dark, to darken’ (Pokorny 1959:247—248; Walde 1927—1932.I: 851—852; Mann 1984—1987:182, 182—183, 183)	dark’, <i>dimma</i> ‘to make dark, to darken’; Old English <i>dimm</i> ‘dark’; Old High German <i>timber</i> ‘dark, gloomy’, <i>(be)timberēn</i> ‘to become dark’, <i>petimberen</i> ‘to darken’, <i>timberī</i> ‘darkness’; Old Irish <i>dem</i> ‘black, dark’
<b>du-ú-n-</b> (< * <i>tŋ-</i> ) ‘to win, to overpower’ (Catsanicos 1996)	* <i>ten-/*ton-/*tŋ-</i> ‘to stretch, to extend’ (Pokorny 1959:1065—1066; Walde 1927—1932.I: 722—724; Mann 1984—1987:1379, 1381, 1382, 1403, 1404, 1404—1405, and 1405)	Sanskrit <i>tanóti</i> ‘to extend, to spread, to stretch; to be protracted, to continue, to endure; to put forth; (passive) to be put forth or extended, to increase’, <i>tatá-h</i> (< * <i>tŋ-to-s</i> ) ‘extended, stretched, spread, diffused, expanded’; Greek <i>τανύω</i> ‘to stretch, to stretch out’, <i>τείνω</i> ‘to stretch, to spread, to extend, to stretch out, to reach’; Latin <i>tendō</i> ‘to stretch, to stretch out, to extend, to spread; to set a trap, to lay snares’, <i>teneō</i> ‘to hold’; Old Irish <i>tennaim</i> ‘to press, to tighten; to pursue’; Welsh <i>tynnaf</i> ‘to pull’, <i>tynn</i> ‘tight’; Gothic <i>uf-þanjan</i> ‘to stretch out, to strive for’, * <i>at-pinsan</i> ‘to attract to oneself’; Old Icelandic <i>þenja</i> ‘to stretch, to extend’; Old English <i>þennan</i> , <i>þenian</i> ‘to stretch out, to extend; to prostrate; to exert oneself’; Old Saxon <i>thennian</i> ‘to stretch, to extend’; Old High German <i>denen</i> , <i>dennen</i> ‘to stretch’; Lithuanian <i>tinstu</i> , <i>tinti</i> ‘to swell’
<b>tu-nu-u-uš-t-</b> (< * <i>dhŋ-</i> ) ‘to cover, to plaster with’ (Catsanicos 1996)	* <i>dhen-/*dhon-/*dhŋ-</i> ‘to cover’; extended form: * <i>dhen-gh-/*dhon-gh-/*dhŋ-gh-</i> ‘to cover’ (Pokorny 1959:250; Walde 1927—1932.I:791—792 and I:854; Mann 1984—	Lithuanian <i>dengiù</i> , <i>deñgti</i> ‘to cover’, <i>dangà</i> ‘cover, roof; garment’, <i>dangùs</i> ‘sky, heaven’

	1987:183, 184, 193—194, 198)	
<b>du-ú-r-</b> (< * <i>dhr</i> -) ‘to go down’ (Catsanicos 1996); <b>turi</b> (< * <i>dhr</i> -) ‘inferior’	* <i>dher</i> -/* <i>dhor</i> -/* <i>dhr</i> - ‘to go down, to fall down’; extended form: * <i>dher-g<sup>w</sup></i> -/* <i>dhor-g<sup>w</sup></i> -/* <i>dhr-g<sup>w</sup></i> - ‘to go down, to fall down’ (Mann 1984—1987:185)	Albanian <i>dirgjem</i> ‘to descend’; Lithuanian <i>dirgstu</i> , <i>dirgti</i> ‘to collapse, to break down’. Mann (1984—1987:185) also includes Sanskrit <i>dhárjati</i> , <i>dhrájati</i> ‘to go, to move’.
<b>tur(u)bi</b> (< * <i>dhr-bh</i> -) ‘enemy’	* <i>dher-bh</i> -/* <i>dhor-bh</i> -/* <i>dhr-bh</i> - ‘to strive, to toil; to afflict, to irk’ (Mann 1984—1987:185, 198, and 211)	Old English <i>dyrfan</i> ‘to afflict, to injure; to imperil, to endanger’, <i>dyrfing</i> ‘affliction’, <i>dearf</i> ‘bold’; Irish <i>doirbh</i> ‘morose, grievous, hard’
<b>turuhi</b> (< * <i>trH<sub>2</sub></i> -) ‘male, masculine’	* <i>terH<sub>2</sub></i> -/* <i>torH<sub>2</sub></i> -/* <i>tr<sub>g</sub>H<sub>2</sub></i> -, * <i>treH<sub>2</sub></i> -/* <i>troH<sub>2</sub></i> -/* <i>tr<sub>g</sub>H<sub>2</sub></i> - (> * <i>trā</i> -/* <i>trō</i> -/* <i>tr<sub>g</sub></i> -) ‘to be strong, powerful; to control’ (Pokorny 1959:1074—1075; Walde 1927—1932.I:732—734; Mann 1984—1987:1420 and 1446; Mayrhofer 1956—1980. I:480 I:520, and I:532—533; Kloekhorst 2008:835—839)	Hittite <i>tar-ah-zi</i> ‘to be able, to be powerful; to control, to conquer’, <i>tarhuli-</i> ‘strong’, <i>tarhu-</i> , <i>taruh-</i> ‘to be strong’; Sanskrit <i>táratí</i> ‘to surpass, to overcome, to subdue, to escape’ (also ‘to pass across or over, to cross over [a river], to sail across; to float, to swim; to get through, to attain an end or a goal; to live through [a definite period]; to study to the end; to fulfil, to perform, to accomplish’), <i>tráyate</i> ‘to protect, to preserve, to cherish, to defend, to rescue from’, <i>trá</i> ‘a protector, defender’, <i>trāṇa-</i> ‘(adj.) protected; (n.) protecting, preserving; protection, defense, shelter, help’, <i>túrvati</i> (< * <i>tr<sub>g</sub>H<sub>2</sub>-w</i> -) ‘to overpower’, <i>túrvī-h</i> ‘superior’
<b>tuw</b> (< * <i>duw</i> -) ‘clean’ (Diakonoff 1971)	* <i>dew</i> -/* <i>dow</i> -/* <i>du</i> - ‘to be or become fit, pure; to purify, to bless’ (used in a religious/ritualistic sense) (Pokorny 1959:218—219; Walde 1937—1932.I:778; Ernout—Meillet 1979:73; Mayrhofer 1956—1980.I:53—54). For	Latin <i>bonus</i> (Old Latin <i>duenos</i> [< * <i>dw-eno-s</i> ]) ‘good’, <i>beō</i> (< * <i>dw-éyō</i> ) ‘to bless, to make happy’; Sanskrit <i>dúvas-</i> ‘gift, oblation, worship, honor, reverence’, <i>duvasyáti</i> ‘to honor, to worship, to reward, to celebrate’; Old Irish <i>den</i>

	the semantics, cf. Mallory—Adams 2006:413.	‘strong, fit, able’
<b>tuwal-</b> (< *duw-el-) ‘to strike, to beat’	*dew-//*dow-//*du- ‘to hit, to strike’ (Pokorny 1959:203; Walde 1927—1932.I:794—795)	Old Irish <i>dorn</i> ‘fist’, <i>durni</i> ‘to strike with fists’; Latvian <i>dūre, dūris</i> ‘fist’, <i>dūru, dūru, dūrt</i> ‘to sting, to thrust’; Old Icelandic <i>tjón</i> ‘damage, loss’, <i>týna</i> ‘to lose, to destroy, to put to death’, (reflexive) <i>týnast</i> ‘to perish’, <i>týning</i> ‘destruction’; Old English <i>tēona</i> ‘injury, suffering, injustice, wrong, insult, contumely, quarrel’, <i>tēonian</i> ‘to irritate’, <i>tīenan</i> ‘to annoy, to irritate’; Old Saxon <i>tiono</i> ‘evil, harm, injury, wrong, hostility, enmity’, <i>gitianian</i> ‘to do wrong’.
<b>u-be/we</b> (< *ubh-) ‘stupid, insane’ (Catsanicos 1996)	*webh-//*wobh-//*ubh- ‘to go astray, to be confused’ (Pokorny 1959:1114—1115; Walde 1927—1932.I:257—258; Mann 1984—1987:1496)	(?) Sanskrit <i>vabhrati</i> ‘to go astray’; Old Icelandic <i>vafra</i> ‘to move unsteadily, to flicker; to hover about’, <i>vafli</i> ‘a wavering, hesitation’, <i>vafla</i> ‘to become confused’, <i>vafi</i> ‘uncertainty, doubt’; Middle High German <i>waberan</i> ‘to move about, to frequent’
<b>ú-et-t-</b> (< *H <sub>4</sub> u-) ‘to be hungry’ (Catsanicos 1996)	*H <sub>4</sub> ew- (> *aw-) ‘to long for, to desire’ (Pokorny 1959:77—78; Walde 1927—1932.I:19; Mann 1984—1987:45—46 and 47)	Sanskrit <i>ávati</i> ‘to be pleased, to strive for’, <i>áva-h</i> ‘favor, protection, gratification’; Avestan <i>avaiti</i> ‘to protect, to help’, <i>avah-</i> ‘protection’; Latin <i>aveō</i> ‘to long for, to desire’, <i>avidus</i> ‘passionately desiring, longing for; greedy for money, avaricious; gluttonous; bloodthirsty’, <i>aviditās</i> ‘vehement desire for, longing for (especially for food or money)’; Welsh <i>ewyllys</i> ‘will’, <i>awydd</i> ‘desire’ (Latin loan)
<b>ull-</b> (< *wl-) ‘to destroy’; <b>ullul-</b> (< *wl-wl-) ‘to die’;	*wel-H <sub>2</sub> -/*wol-H <sub>2</sub> -/*wl-H <sub>2</sub> - ‘to strike, to wound’ (Pokorny	Hittite <i>wa-al-ah-zi, wa-al-ha-an-na-i</i> ‘to strike, to attack’;

<b>u-ul-mi</b> (< * <i>wl-m-</i> ) ‘weapon’ (Catsanicos 1996)	1959:1144—1145; Walde 1927—1932.I:304—305; Mann 1984—1987:1571—1572; Kloekhorst 2008:945—946	Luwian <i>u(wa)lant-</i> ‘death’, <i>u(wa)lantal(l)i-</i> ‘mortal’; Hieroglyphic Luwian <i>wal(a)-</i> ‘death’, <i>walatali-</i> ‘mortal’; Greek οὐλή (< *Φολ-νά) ‘wound, scar’; Latin <i>vulnus</i> ( <i>volnus</i> ) ‘wound’, <i>vulnerō</i> ( <i>volnerō</i> ) ‘to wound, to injure’; Old Irish <i>fuil</i> ‘blood’; Welsh <i>gweli</i> ‘wound’; Old Icelandic <i>valr</i> ‘the slain’; Old English <i>wæl</i> ‘slaughter, carnage, field of battle’, <i>wōl</i> ‘pestilence, mortality, disease’, <i>wēlan</i> ‘to torment, to afflict’; Old Saxon <i>wōlian</i> ‘to kill, to slaughter’, <i>wal</i> ‘battlefield’; Old High German <i>wal</i> ‘battlefield’, <i>wuol</i> ‘defeat, ruin’; Lithuanian <i>vēlē</i> ‘the soul of a dead person, ghost’, <i>vēlnias</i> ‘devil’, <i>velys</i> ‘death’; Tocharian A <i>wäl-</i> , <i>wal-</i> ‘to die’, B <i>wäl-</i> ‘to strike, to break’ (perhaps also <i>Ylaiñakte</i> ‘Indra’ [< ‘smiter’]), (?) <i>wālts-</i> ‘to crush, to grind; to agitate, to trouble’
<b>uli</b> (< * <i>H<sub>4</sub>l-</i> ) ‘other’	* <i>H<sub>4</sub>el-</i> (> * <i>al-</i> ) ‘other’ (Pokorny 1959:24—26; Walde 1927—1932.I:84—86; Mann 1984—1987:15—16)	Latin <i>alius</i> ‘another, other, different’, <i>alter</i> ‘one of two; the one...the other’; Old Irish <i>aile</i> ‘other’; Greek ἄλλος ‘another; one besides’; Gothic <i>aljis</i> ‘other’; Tocharian B <i>alyek</i> ‘other, another’, <i>ālyauce</i> ‘one another, each other’
<b>un-</b> (< * <i>wŋ-</i> ) ‘to come’	(A) * <i>wendh-/*wondh-/*wŋdh-</i> ‘to wend, to turn around, to return’ (extended form of * <i>wen-/*won-/*wŋ-</i> ‘to bend, to twist, to turn’) (Pokorny 1959:1148; Walde 1927—1932.I:261; Mann 1984—1987:1513 and 1575)	(A) Gothic <i>wandjan</i> ‘to turn away, to return’; Old Icelandic <i>venda</i> ‘to wend, to turn; to wend one’s way; to return’; Old English <i>wendan</i> ‘to turn, to return; to wend one’s way, to go’, <i>wandrian</i> ‘to wander’; Old High German <i>wentan</i> ‘to

	(B) * <i>wengh-/*wongh-/*wŋgh-</i> ‘to go, to move’ (extended form of * <i>wen-/*won-/*wŋ-</i> ‘to bend, to twist, to turn’) (Mann 1984—1987:1514)	turn around or about’  (B) Sanskrit <i>vaṅghate</i> ‘to go; to set out; to begin; to move swiftly’
<b>undu</b> (< * <i>H<sub>1</sub>ndh-</i> ) ‘then, when’	* <i>H<sub>1</sub>endh-/*H<sub>1</sub>ndh-</i> (> * <i>endh-/*ndh-</i> ) ‘here, there; thereupon, then; when’ (Pokorny 1959:284; Walde 1927—1932.I:99; Mann 1984—1987:242 and 243)	Armenian <i>and</i> ‘there, yonder’; Greek <i>ἐνθα</i> ‘here and there, hither and thither; thereupon, then, just then; where, whither; when’, <i>ἐνθεν</i> ‘thence; thereupon, thereafter; whence’; Latin <i>inde</i> ‘thence, from there; then, thereupon; from that time forth’, <i>unde</i> ‘whence, from which, from where’
<b>ur-</b> (< * <i>wṛ-</i> ‘to turn’) ‘to take place, to happen’	* <i>wer-/*wor-/*wṛ-</i> ‘to turn’ (this root has numerous extended forms) (Pokorny 1959:1152—1159; Walde 1927—1932.I:270—280; Mann 1984—1987:1517, 1519, 1522, 1523, 1576—1577, 1580, 1584—1585, 1586, 1586—1587, 1587, 1588, 1589, 1590, 1590—1591, 1591, 1592, 1593, 1593—1594, 1594, 1595, 1596, 1597, 1599, 1600, 1601, 1602, 1603, 1604, 1604—1605, 1605, 1605—1606)	Sanskrit <i>vártate</i> ‘to turn, to turn round, to revolve, to roll; to take place, to happen, to occur; to be, to exist’; Gothic <i>wairpan</i> ‘to become’; Old English <i>weorpan</i> ‘to happen; to come into being, to arise; to become’; Old High German <i>werdan</i> ‘to become, to come to be, to arise, to come into existence’; Old Icelandic <i>verða</i> ‘to happen, to come to pass; to happen to, to befall one; to happen to be, to occur; to become’
<b>urhi</b> (< * <i>wṛ-H<sub>2</sub>-</i> ) ‘true, faithful’ <b>urhupti</b> (< * <i>wṛ-H<sub>2</sub>-</i> ) ‘(vb.) to trust, to believe; (n.) truth’ <b>ur(u)hzi</b> (< * <i>wṛ-H<sub>2</sub>-</i> ) ‘right; to conform’ (Diakonoff 1971)	* <i>wer-H<sub>2</sub>-</i> ‘true, right, proper’ (only the lengthened-grade form is attested: * <i>wēro-s</i> ) (Pokorny 1959:1165—1166; Walde 1927—1932.I:285—286; Mann 1984—1987:1516, 1519, and 1520)	Latin <i>vērus</i> ‘true, real, genuine’; Old English <i>wēr</i> ‘true’; Old High German <i>wār</i> ‘true, real, genuine, veritable, proper’; Old Irish <i>fir</i> ‘true’; Welsh <i>gwīr</i> ‘true’; Old Church Slavic <i>věra</i> ‘faith’
<b>urunni</b> (< * <i>wṛ-</i> ‘to turn’) ‘back(ward)’; <b>uruntalli</b> (< * <i>wṛ-</i> ‘to turn’) ‘posterior’	* <i>wer-/*wor-/*wṛ-</i> ‘to turn’ (this root has numerous extended forms) (Pokorny 1959:1152—1159; Walde 1927—1932.I:270—280;	Latin <i>versus</i> ‘towards, in that direction’, <i>vertō</i> ‘to turn, to turn round’; Tocharian B <i>wrattsai</i> ‘against’; Old Irish <i>frith-</i> ‘against; back’; Welsh

	Mann 1984—1987:1517, 1519, 1522, 1523, 1576—1577, 1580, 1584—1585, 1586, 1586—1587, 1587, 1588, 1589, 1590, 1590—1591, 1591, 1592, 1593, 1593—1594, 1594, 1595, 1596, 1597, 1599, 1600, 1601, 1602, 1603, 1604, 1604—1605, 1605, 1605—1606)	gwrth- ‘against’; Old English -weard ‘towards, to’; Old High German -wart ‘towards, to’; Sanskrit várta ‘to turn, to turn round, to revolve, to roll; to take place, to happen, to occur; to be, to exist’; Lithuanian vērsti ‘to turn to overturn’, virstù, vīrsti ‘to fall, to overturn; to tip over, to tumble, to upset’
<b>ušrianne</b> (< *us-) ‘heir, prince’ (Diakonoff 1971); <b>uštay</b> (< *us-) ‘hero’	*wes-(*us-) ‘good, brave, noble’ (Pokorny 1959:1174—1175; Walde 1927—1932.I: 310; Mann 1984—1987:1527 and 1530)	Greek ἐῦς ‘good, brave, noble’; Sanskrit vásu-ḥ ‘good, excellent, beneficent’; Old Irish <i>fhu</i> ‘worthy’, <i>fó</i> ‘good’; Welsh <i>gwiw</i> ‘worthy’; Breton <i>gwiou</i> ‘merry’
<b>wali</b> (< *wol-) ‘worm’ (?)	*wel-/*wol-/*wl- ‘to turn, to roll, to revolve’ (Pokorny 1959:1140—1144; Walde 1927—1932.I:298—304; Mann 1984—1987:1508—1509, 1150, 1511, 1511—1512, 1512, 1555, 1555—1556, 1556, 1569, 1569—1570, 1571—1572)	Sanskrit válati, válate ‘to turn, to turn around, to turn to’; Armenian <i>gelum</i> ‘to twist, to press’, <i>glem</i> ‘to roll’, <i>glor</i> ‘round’; Greek εἰλέω ‘to roll up, to pack close, to wind, to turn around, to revolve’, εἰλύω ‘to enfold, to enwrap’, ἔλμις ‘(intestinal) worm’; Latin <i>volvō</i> ‘to roll, to wind, to turn around, to twist around’; Gothic <i>af-walwjan</i> ‘to roll away’, <i>at-walwjan</i> ‘to roll to’; Old Icelandic <i>valr</i> ‘round’, <i>velta</i> ‘to roll’; Old English <i>wielwan</i> ‘to roll’, <i>wealwian</i> ‘to roll’, <i>wealte</i> ‘a ring’, <i>wealcan</i> ‘to roll, to fluctuate (intr.)’; to roll, to whirl, to turn, to twist (tr.)’, <i>wealcian</i> ‘to roll (intr.)’, <i>gewealc</i> ‘rolling’, <i>welung</i> ‘revolution (of a wheel)’; Old High German <i>walzan</i> ‘to roll, to rotate, to turn about’; Tocharian B <i>wäl-</i> ‘to curl’; Tocharian A (pl.) <i>walyi</i> ‘worms’, B <i>yel</i> ‘worm’

<b>wa-ri-š-</b> (< * <i>wor-</i> ) ‘to go to, to be headed to’ (Catsanicos 1996)	* <i>wer-</i> /* <i>wor-</i> /* <i>wr-</i> ‘to turn (to or towards)’ (this root has numerous extended forms) (Pokorny 1959:1152—1159; Walde 1927—1932.I:270—280; Mann 1984—1987:1517, 1519, 1522, 1523, 1576—1577, 1580, 1584—1585, 1586, 1586—1587, 1587, 1588, 1589, 1590, 1590—1591, 1591, 1592, 1593, 1593—1594, 1594, 1595, 1596, 1597, 1599, 1600, 1601, 1602, 1603, 1604, 1604—1605, 1605, 1605—1606)	Latin <i>versus</i> ‘towards, in that direction’, <i>vertō</i> ‘to turn, to turn round’; Tocharian B <i>wrattsai</i> ‘against’; Old Irish <i>frith-</i> ‘against; back’; Welsh <i>gwrth-</i> ‘against’; Old English <i>-weard</i> ‘towards, to’; Old High German <i>-wart</i> ‘towards, to’; Sanskrit <i>vártate</i> ‘to turn, to turn round, to revolve, to roll; to take place, to happen, to occur; to be, to exist’; Lithuanian <i>ver̄sti</i> ‘to turn to overturn’, <i>virstù</i> , <i>vīrsti</i> ‘to fall, to overturn; to tip over, to tumble, to upset’
<b>we</b> (< * <i>we</i> ) ‘thou’	(A) * <i>we(-s)-/wo(-s)-</i> , (reduced-grade) * <i>u(-s)-</i> 2nd person personal pronoun stem dual and plural (Pokorny 1959: 514; Walde 1927—1932.I: 209—210; Mann 1984—1987: 1582)  (B) *- <i>we</i> in: Acc. sg. * <i>t(e)+wé</i> (> * <i>twé</i> ); Gen. sg. * <i>te+we</i> (> * <i>téwe</i> ); Abl. sg. * <i>t(e)+w-ét</i> (> * <i>twét</i> ) (Burrow 1973:266; Sihler 1995:374 [paradigms 372—373]).	(A) Sanskrit Acc.-Dat.-Gen. pl. <i>vas</i> , Acc.-Dat.-Gen. dual <i>vām</i> ‘you’; Latin Nom.-Acc. pl. <i>vōs</i> , Gen. pl. <i>vestrum</i> , Dat.-Abl. pl. <i>vōbīs</i> ‘you’; Old Church Slavic Nom.-Acc. dual <i>va</i> , Nom.-Acc. pl. <i>vy</i> ‘you’. Reduced-grade in: Greek Nom. pl. <i>ὑμεῖς</i> (also <i>ὑμμες</i> ), Acc. pl. <i>ὑμμε</i> (also <i>ὑμέας</i> ) (< * <i>us-me</i> ) ‘you’  (B) Sanskrit Gen. sg. <i>táva</i> (< * <i>té+we</i> ) ‘your’; Avestan Gen. sg. <i>tava</i> ‘your’
<b>wu-ku-ga-ri</b> (< * <i>(w)ugh-</i> + dual suffix) ‘(two ?) fingers’ (Catsanicos 1996)	* <i>woghis</i> , - <i>yos</i> ‘pointed object: spike, point, prong’ (> ‘wedge, peg’) (Pokorny 1959:1179—1180; Walde 1927—1932.I: 315—316; Mann 1984—1987: 1559)	Old Icelandic <i>veggr</i> ‘wedge’; Old English <i>wecg</i> ‘wedge’ (< Common Germanic * <i>wazjaz</i> ); Old High German <i>wecki</i> , <i>weggi</i> ‘wedge’; Lithuanian <i>vágis</i> ‘peg’; Latvian <i>vadzis</i> ‘wedge, peg’; Old Prussian <i>wagnis</i> ‘plowshare’
<b>wur-</b> < <i>wu/bu-u-r-&gt;</i> (< * <i>bhr-</i> ) ‘to see’	* <i>bherH<sub>I</sub>g-</i> , * <i>bhreH<sub>I</sub>g-</i> (> * <i>bhrēg-</i> ) ‘to shine, to gleam, to be bright’ (the root is * <i>bher-</i> ) (Pokorny 1959:139—140; Walde 1927—1932.II:170—	Sanskrit <i>bhrájate</i> ‘to shine, to gleam, to glitter, to sparkle’; Avestan <i>brāzaiti</i> ‘to beam’, <i>brāza-</i> ‘shimmering; radiance’; Welsh <i>berth</i>

	171; Mann 1984—1987:73)	‘beautiful’; Gothic <i>bairhts</i> ‘bright, manifest’, <i>bairhiei</i> ‘brightness’; Old Icelandic <i>bjartr</i> ‘bright, shining’, <i>birti</i> ‘brightness’; Old English <i>beorht</i> ‘(adj.) shining, bright, clear, brilliant; (n.) brightness, gleam, light; sight’, <i>beorhte</i> ‘brightly, brilliantly, splendidly; clearly, lucidly, distinctly’; Old High German <i>beraht</i> ‘bright’; Lithuanian <i>bréksti</i> ‘to dawn’
<b>wur</b> (< * <i>wṛ-</i> ) ‘to desire, to promise’ (?)	* <i>wer-/*wor-/*wṛ-</i> ‘to say, to speak, to tell’ (Pokorny 1959: 1162—1163; Walde 1927—1932.I:283—284; Mann 1984—1987:1516, 1577—1578, and 1598—1599; Kloekhorst 2008:1002—1003 )	Greek εἴρω (< *Ἐριω) ‘to say, to speak, to tell’; Hittite (3rd sg. pres.) <i>ú-e-ri-ya-zi</i> ‘to invite, to summon, to name’; Palaic (3rd sg. pres.) <i>ú-e-er-ti</i> ‘to say, to call’; Latin <i>verbum</i> ‘word’; Gothic <i>waurd</i> ‘word’; Old Icelandic <i>orð</i> ‘word’, <i>yrða</i> ‘to speak’; Old English <i>word</i> ‘word’; Old High German <i>wort</i> ‘word’; Old Prussian (nom. sg. m.) <i>wīrds</i> , <i>wirds</i> ‘word’ (acc. sg. m. <i>wirdan</i> ); Lithuanian <i>vařdas</i> ‘name’.
<b>wu-ta-ri-ni</b> (< *( <i>w</i> ) <i>ud-or-</i> ) ‘dishwasher’ (Catsanicos 1996)	* <i>wed-/*wod-/*ud-</i> ‘to wet, to moisten’, * <i>wed-ōr-</i> , * <i>wod-ōr-</i> (heteroclitic <i>-r/n</i> -stem) ‘water’ (Pokorny 1959:78—81; Walde 1927—1932.I:252—254; Mann 1984—1987:1474, 1497, 1558; Mallory—Adams 1997:636; Mayrhofer 1956—1980.I:103; Kloekhorst 2008: 987—988)	Luwian (dat. sg.) <i>ú-i-ti</i> ‘water’; Hittite (nom.-acc. sg.) <i>wa-a-tar</i> ‘water’; Sanskrit <i>udán</i> ‘water’, <i>ud-</i> , <i>und-</i> ( <i>unátti</i> , <i>undati</i> ) ‘to flow, to wet, to bathe’; Greek ὕδωρ ‘water’ (gen. sg. ὕδατος [< Pre-Greek * <i>ud̥tos</i> ]); Gothic <i>watō</i> ‘water’ (gen. sg. <i>watins</i> ); Old Icelandic <i>vatn</i> ‘water’, <i>vátr</i> ‘wet’; Old English <i>wæt</i> ‘wet, moist, rainy’, <i>wætan</i> ‘to wet, to moisten, to water’, <i>wæter</i> ‘water’; Old High German <i>wazzar</i> ‘water’; Latvian <i>ūdens</i> ‘water’; Old Church Slavic <i>voda</i> ‘water’;

		Russian <i>vodá</i> [вода] ‘water’
<b>ya/ye</b> (< <i>*H<sub>1</sub>yo-</i> ) ‘who, which, what’	<i>*H<sub>1</sub>yo-</i> (> <i>*yo-</i> ) ‘who, which’ (Pokorny 1959:283; Walde 1927—1932.I:98; Mann 1984—1987:452; Fortson 2004:130; Szemerényi 1996:210)	Sanskrit <i>yá-h</i> ‘which’; Greek ὅς, ἥ, ὁ ‘which’; Phrygian <i>ιος</i> ‘which; this’
<b>zabalgi</b> (< <i>*dzobh-</i> ) ‘fault, blame’	<i>*debh-/*dobh-</i> ‘to beat, to hit, to strike, to harm, to injure’ (earlier <i>*dzebh-/*dzobh-</i> ) (Pokorny 1959:240; Walde 1927—1932.I:850—851; Mann 1984—1987:129; Mayrhofer 1956—1980.II:17—18)	Sanskrit <i>dabhnóti</i> ‘to hurt, to injure, to destroy; to deceive, to abandon’, <i>dabhrá-h</i> ‘distress’; Pāli <i>dubbhati</i> ‘to hurt, to deceive’; Prakrit <i>dūbhai</i> ‘to be unhappy’; Gujarati <i>dubhvū</i> , <i>dubhāvvū</i> ‘to tease, to vex’; Avestan <i>dab-</i> ‘to deceive’; Lithuanian <i>dobiù</i> , <i>dóbtu</i> ‘to beat, to hit, to kill’
<b>ziyari</b> (< <i>*dziy-ar-</i> or <i>*dz<sub>o</sub>H<sub>4</sub>y-ar-</i> ) ‘flank, side’	<i>*day(H<sub>4</sub>)-/*di(H<sub>4</sub>)-</i> (> <i>*dī-</i> ) ‘to divide’ (earlier <i>*dzay/[H<sub>4</sub>]-</i> ) or <i>*daH<sub>4</sub>y-</i> (> <i>*dāy-</i> ) (earlier <i>*dzaH<sub>4</sub>y-</i> ) (Pokorny 1959: 175—179; Walde 1927—1932.I:763—767; Mann 1984—1987:131, 132, 133, 135, and 148; Mayrhofer 1956—1980.II:31, II:31—32, II:32)	Sanskrit <i>dāti</i> , <i>dyáti</i> ‘to cut, to divide, to mow’, <i>dātu-</i> ‘part, division, task’, <i>dāyá-h</i> ‘share, inheritance’; Greek δαίω ‘to divide, to distribute’; Latvian <i>daiva</i> ‘part’; Old Church Slavic <i>dělъ</i> ‘portion’
<b>zulud</b> (< <i>*tsl-</i> ) ‘to untie, to let go’	<i>*tel-/*tol-/*tl-</i> ‘to leave, to abandon, to let go’ (extended form in Germanic: <i>*tl-ew-/*tl-ow-/*tl-u-</i> , with root in zero-grade and suffix in full-grade) (earlier <i>*tsel-/*tsol-/*tsl-</i> ) (Kloekhorst 2008:816—818)	Hittite (3rd sg. pres.) <i>ta-la-a-i</i> , <i>da-li-ya-zi</i> ‘to leave, to abandon, to let go’; Gothic <i>pliuhan</i> ‘to flee’, <i>*unpa-pliuhan</i> ‘to escape’, <i>plauhs</i> ‘flight’; Old Icelandic <i>flyja</i> (< <i>*θleuχan-</i> ) ‘to flee, to take flight’, <i>flugr</i> ‘flight’, <i>flótti</i> ‘flight’; Old English <i>flēon</i> ‘to fly from, to flee, to escape’, <i>flyht</i> ‘flying, flight’, <i>flēam</i> ‘flight’; Old Saxon <i>fliohan</i> ‘to flee’, <i>fluht</i> ‘flight’; Old High German <i>fliohan</i> ‘to flee’, <i>fluht</i> ‘flight’. The Common Germanic forms are to be reconstructed as follows:

		* <i>pleuχan</i> , * <i>plauχ</i> , * <i>pluzum</i> , * <i>plogan</i> -.
<b>zurgi</b> (< * <i>dzhr</i> -) ‘blood’	* <i>dher</i> -/* <i>dhor</i> -/* <i>dhr</i> - ‘to gush forth, to burst forth, to spurt’ (earlier * <i>dzher</i> -/* <i>dzhor</i> -/* <i>dzhr</i> -) (Pokorny 1959:256; Walde 1927—1932.I:861; Mann 1984—1987:186)	Semantic development in Germanic from ‘to leave, to leave behind, to depart’ to ‘to flee, to escape’ as in Kashmiri <i>rinzun</i> ‘to escape, to flee away secretly’ (cf. Pāli <i>riñcati</i> ‘to leave behind’). Greek θορός, θορή ‘semen’, θοῦρος (< *θόρ- <i>Foς</i> ) ‘rushing, raging’, θρώσκω ‘to leap, to spring; to attack, to assault, i.e., to leap upon; to rush, to dart’; Sanskrit <i>dhārā</i> ‘flood, gush’; West Pahari (Bhalesi) <i>nak-dhār</i> ‘nose-bleeding’; Middle Irish <i>dar</i> - ‘to spring, to leap’

## APPENDIX

The following roots can be traced back to the common ancestor of Proto-Indo-European and Hurrian:

- \**bheH<sub>2</sub>-* (> \**bhā-*) ‘to strike’
- \**bher-/\*bhor-/\*bhṛ-* ‘to bear, to carry’
- \**bher-gh-/\*bhor-gh-/\*bhṛ-gh-*‘(adj.) high, tall; great, strong; (n.) mountain, hill’
- \**bherH<sub>1</sub>ḡ-*, \**bhreH<sub>1</sub>ḡ-* (> \**bhrēḡ-*) ‘to shine, to gleam, to be bright’
- \**bhewdh-/\*bhowdh-/\*bhudh-* ‘to be or become aware of; to prompt, to arouse, to exhort’
- \**day(H<sub>4</sub>)-/\*di(H<sub>4</sub>)-* (> \**dī-*) ‘to divide’ (earlier \**dzay[H<sub>4</sub>]-*) or \**daH<sub>4</sub>y-* (> \**dāy-*) (earlier \**dzaH<sub>4</sub>y-*)
- \**dē/\*dō* ‘to, towards; from’
- \**debh-/\*dobh-* ‘to beat, to hit, to strike, to harm, to injure’ (earlier \**dzebh-/\*dzobh-*)
- \**deH<sub>1</sub>-* (> \**dē-*) ‘to lack, to need’ (earlier \**dzeH<sub>1</sub>-*)
- \**dei-/\*doi-/\*di-* ‘to shine, to be bright’
- \**del-/\*dol-/\*dl-* ‘to stretch, to extend, to lengthen’
- \**del-/\*dol-/\*dl-* ‘to split, to cleave’ (earlier \**dzel-/\*dzol-/\*dzl-*)
- \**der-/\*dor-/\*dr-* ‘to run, to flow’
- \**dew-/\*dow-/\*du-* ‘to hit, to strike’
- \**dew-/\*dow-/\*du-* ‘to be or become fit, pure; to purify, to bless’
- \**doH<sub>4</sub>-* (> \**dō-*) ‘to give’
- \**dhāḡh-* ‘beautiful, fine, good, harmonious, abundant’
- \**dhal-* ‘to bloom; to be leafy, lush’
- \**dheH<sub>1</sub>-* (> \**dhe-*) ‘to say, to speak’
- \**dheH<sub>1</sub>-* (> \**dhe-*) ‘(vb.) to put, to place, to set; to do; (n.) thing done, deed; setting, placing, putting’
- \**dhel-/\*dhol-/\*dhł-* ‘to gash, to wound, to slay’
- \**dhem-/\*dhom-/\*dhm-* ‘to become dark, to make dark, to darken’
- \**dhen-/\*dhon-/\*dhṇ-* ‘to cover’
- \**dher-/\*dhor-/\*dhr-* ‘to gush forth, to burst forth, to spurt’ (earlier \**dzher-/\*dzhor-/\*dzhṛ-*)
- \**dher-/\*dhor-/\*dhr-* ‘to go down, to fall down’
- \**dher-bh-/\*dhor-bh-/\*dhr-bh-* ‘to strive, to toil; to afflict, to irk’
- \**gen-/\*gon-/\*gṇ-* ‘to kneel, to bow down’
- \**genu-, \*gnew-* ‘knee’
- \**grH-no-* (> \**grno-*) ‘grain’
- \**ghebh-* ‘to give’
- \**g<sup>w</sup>edh-/\*g<sup>w</sup>odh-* ‘to strike, to beat, to smash’
- \**g<sup>w</sup>el-/\*g<sup>w</sup>l- ~ \*g<sup>w</sup>l-* ‘to call out, to cry out’
- \**H<sub>1</sub>am(m)a-* (> \**am(m)a*) nursery word: ‘mother, grandmother’
- \**H<sub>1</sub>atta-* (> \**atta-*) nursery word: ‘father’
- \**H<sub>1</sub>e-no-, \*H<sub>1</sub>o-no-* (> \**e-no-, \*o-no-*) demonstrative pronoun stem: ‘that, yonder’
- \**H<sub>1</sub>endh-/\*H<sub>1</sub>ṇdh-* (> \**endh-/\*ṇdh-*) ‘here, there; thereupon, then; when’
- \**H<sub>1</sub>ep-* ‘to cook’

- \**H<sub>1</sub>er-s-/\*H<sub>1</sub>or-s-/\*H<sub>1</sub>ṛ-s-* (> \*ers-/\*ors-/\*ṛs-) ‘to move quickly’
- \**H<sub>1</sub>ēs-* (> \*ēs-) ‘to sit, to be seated’
- \**H<sub>1</sub>ey-/\*H<sub>1</sub>i-* (> \*ey-/\*i-) ‘to go’
- \**H<sub>1</sub>idh-i* (> \*idhi), \**H<sub>1</sub>idh-e* (> \*idhe) ‘yonder, over there’
- \**H<sub>1</sub>obhi* (> \*obhi) ‘to, towards; in front of, before; beyond’
- \**H<sub>1</sub>odh-o-* (> \*odh-o-) ‘now, then, so’
- \**H<sub>1</sub>ol-* (> \*ol-) demonstrative pronoun stem: ‘that over there, that yonder’
- \**H<sub>1</sub>ordho-/\*H<sub>1</sub>ṛdho-* (> \*ordho-/\*ṛdho-) ‘dwelling place’, \**H<sub>1</sub>ordh-/\*H<sub>1</sub>ṛdh-* (> \*ordh-/\*ṛdh) ‘to dwell, to inhabit’
- \**H<sub>1</sub>os-p-* (> \*os-p-) ‘aspen, poplar’
- \**H<sub>1</sub>yo-* (> \*yo-) ‘who, which’
- \**H<sub>2</sub>ed-* (> \*ad-) ‘to cut into, to hollow out, to engrave; to prick, to pierce; to strike, to stab’
- \**H<sub>2</sub>el-* (> \*al-) ‘to grow, to be strong; to nourish, to support, to make strong’
- \**H<sub>2</sub>en-* (> \*an-) ‘to bear, to beget’, \**H<sub>2</sub>en-o-s* (> \*anos) ‘grandmother’, \**H<sub>2</sub>ons-o-s* (> \*onsos) ‘progeny, offspring’
- \**H<sub>2</sub>ep-* (> \*ap-) or \**H<sub>2</sub>ebh-* (> \*abh-) ‘(vb.) to move quickly, to run, to flow; (n.) (flowing or running) water, river, stream, current’
- \**H<sub>2</sub>et-* (> \*āt-) ‘keen, sharp’ (earlier \**H<sub>2</sub>ets-*)
- \**H<sub>2</sub>ew-* ‘to shine, to be bright’
- \**H<sub>2</sub>in(H<sub>1</sub>)-u-/\*H<sub>2</sub>ṇ(H<sub>1</sub>)-ew-* (> \*ēnu-/\*ṇnew-) ‘without; away from, apart from’
- \**H<sub>2</sub>oy-* (> \*oy-) in words for ‘one’: \**oy-ko-/\*oy-kʷo-*, \**oy-wo-*, \**oy-no-*
- \**H<sub>3</sub>owi-* (> \*owi-) ‘sheep’
- \**H<sub>4</sub>e* (> \*a) ‘and, or, but’
- \**H<sub>4</sub>eǵ-* (> \*aǵ-) ‘to drive, to lead’
- \**H<sub>4</sub>eg-w/u-* (> \*agw/u-) ‘(vb.) to cut into, to hew; (n.) ax’
- \**H<sub>4</sub>el-* (> \*al-) ‘other’
- \**H<sub>4</sub>el-* (> \*al-; reduplicated \*al-al-) ‘to shout aloud, to cry out’
- \**H<sub>4</sub>er-* (> \*ar-) ‘to distribute, to allot’
- \**H<sub>4</sub>er/\*H<sub>4</sub>ṛ* (> \*ar/\*ṛ) ‘and, also’
- \**H<sub>4</sub>er-/\*H<sub>4</sub>or-/\*H<sub>4</sub>ṛ-* (> \*ar-/\*or-/\*ṛ-) ‘point, tip, peak’
- \**H<sub>4</sub>est-* (> \*ast-) ‘woman’
- \**H<sub>4</sub>et+kʷe* (> \*at-kʷe) ‘and on the other hand’; \**H<sub>4</sub>et-* (> \*at-) ‘on the other hand’
- \**ḭad-* ‘to fall’
- \**kel-* ‘(vb.) to lift, to raise, to elevate; (n.) hill’
- \**ḭer-/\*ḭor-/\*ḭṛ-*, \**ḭerH-/\*ḭorH-/\*ḭṛH-* ‘uppermost part (of anything): horn, head, skull, crown of head; tip, top, summit, peak; horned animal’
- \**kewdh-/\*kowdh-/\*kudh-* ‘to cover, to hide, to conceal’ (earlier \**kewdzh-/\*kowdzh-/\*kudzh-*)
- \**kol-/\*kol-/\*kl-* ‘to strike, to wound, to injure’
- \**kum-bo-s*, \**kum-bā* ‘point, tip, top, head’ and \**kum-bo-s* (also \**kum-bho-s*) ‘hump’
- \**kʷel-/\*kʷol-/\*kʷl-* ‘to bring to an end’
- \**mē* (prohibitive/negative particle) ‘do not; no, not’
- \**mad-* ‘to help, to support, to care for, to nourish’ (earlier \**madz-*)
- \**med-/\*mod-* ‘to measure, to measure out; to estimate, to reckon’
- \**mel-/\*mol-/\*ml-* ‘to rub, to crush, to grind’

- \**mo-* demonstrative pronoun stem: ‘this, that’
- \**men-/mon-/mñ-* ‘to stay, to remain, to abide, to dwell; to be firm, steadfast, established, enduring’
- \**ne-, no-* demonstrative pronoun stem: ‘that, yonder’
- \**nek-* ‘to tie, to bind, to fasten together’
- \**ner-/nor-/nr-* ‘to move quickly or rapidly’
- \**nes-/nos-* ‘to go after, to seek; to recover, to survive; to thrive, to prosper, to succeed’
- \**new-/now-/nu-* ‘to discern, to discover, to get to know’
- \**newos* ‘new’
- \**nu* ‘now’
- \**pel-/pol-/pl-* ‘to flow’
- \**per-/por-/pr-* ‘(vb.) to harm, to endanger; (n.) harm, danger’
- \**pet-/pot-* ‘to go to or towards; to go against; to go back’
- \**sal-* (also \**sel-*) ‘to move quickly; to spring, to leap, to jump’
- \**sel-/sol-/sl-* ‘to grasp, to seize, to take hold of’
- \**sel(H)-/sol(H)-/sl(H)-* ‘to listen, to understand’
- \**sem-/sm-* ‘together with’
- \**sen-, -sen* ‘self’
- \**ser-/sor-/sṛ-* ‘to move quickly, to flow’
- \**ser-/sor-/sṛ-* ‘to split, to rip apart, to tear asunder’
- \**ser-/sor-/sṛ-* ‘to arrange in order’
- \**sew-/sow-/su-* ‘to wet, to moisten, to flow’
- \**sew-/sow-/su-* ‘to swell, to expand’
- \**sewbh-/sowbh-/subh-* ‘(vb.) to storm, to rage; (n.) fury, storm’
- \**siH<sub>2</sub>-* (> \**sē-*) ‘to throw, to scatter’ > ‘to sow, to plant’
- \**so* ‘this, that’
- \**tap-* ‘to press down, to bring down’
- \**tel-/tol-/tl-* ‘to leave, to abandon, to let go’ (earlier \**tsel-/tsol-/tsł-*)
- \**tem-/tom-/tm-* ‘to cut, to chop; to cut apart, to cut asunder’ (earlier \**tsem-/tsom-/tsm-*)
- \**ten-/ton-/tn-* ‘to stretch, to extend’
- \**terH<sub>2</sub>-/torH<sub>2</sub>-/tr<sub>o</sub>H<sub>2</sub>-, treH<sub>2</sub>-/troH<sub>2</sub>-/tr<sub>o</sub>H<sub>2</sub>-* (> \**trā-/trō-/tṛ-*) ‘to be strong, powerful; to control’
- \**tew-/tow-/tu-, tewH-/towH-/tuH-* (> \**tū-*) ‘to swell’
- \**we(-s)-/wo(-s)-*, (reduced-grade) \**u(-s)-* 2nd person personal pronoun stem dual and plural
- \**webh-/wobh-/ubh-* ‘to go astray, to be confused’
- \**wed-/wod-/ud-* ‘to wet, to moisten’, \**wed-ōr-*, \**wod-ōr-* (heteroclitic -r/n-stem) ‘water’
- \**wel-/wol-/wl-* ‘to turn, to roll, to revolve’
- \**wel-H<sub>2</sub>-/wol-H<sub>2</sub>-/wl-H<sub>2</sub>-* ‘to strike, to wound’
- \**wendh-/wondh-/wṇdh-* ‘to wend, to turn around, to return’
- \**wer-/wor-/wr-* ‘to turn (to or towards)’
- \**wer-/wor-/wr-* ‘to say, to speak, to tell’
- \**wer-H<sub>2</sub>-* ‘true, right, proper’
- \**wes-(/us-)* ‘good, brave, noble’
- \**woghis, -yos* ‘pointed object: spike, point, prong’ (> ‘wedge, peg’)

# 9

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## Before Proto-Indo-European and Hurrian

### Preliminary Remarks

Hurrian cannot be considered an Indo-European language — this is so obvious that it barely needs to be stated. Traditional Indo-European languages, such as Sanskrit, Greek, Latin, Gothic, Old Irish, Old Church Slavic, Tocharian, etc., are clearly related to each other through many common features and shared innovations that are lacking in Hurrian.

However, that is not the end of the argument. In the preceding chapters, we presented evidence that Hurrian and Proto-Indo-European “[bear] a stronger affinity, both in the roots of verbs and in the forms of grammar, than could have been produced by accident; so strong that no philologer could examine [them] without believing them to have sprung from some common source.”<sup>109</sup> In this chapter, we will discuss our views on what that common source may have been like. In so doing, we will have to delve deeply into prehistory, well beyond the horizon of what is traditionally reconstructed for Proto-Indo-European in the traditional handbooks.

### Phonology

Throughout this book, we have operated with a fairly traditional reconstruction of Proto-Indo-European phonology. That reconstruction does not deviate appreciably from what was reconstructed for Proto-Indo-European by the Neogrammarians and does not take into account some of the more radical reinterpretations of Proto-Indo-European phonology that have appeared in the past quarter century such as the glottalic model of Proto-Indo-European consonantism.

In general, the phonological system reconstructed by the Neogrammarians for Proto-Indo-European has tended to be gradually simplified by later investigations. The only major addition to the phonological inventory since the Neogrammarians is the laryngeals ( $*H_1$ ,  $*H_2$ ,  $*H_3$ ,  $*H_4$ , which are sometimes also written  $*\varrho_1$ ,  $*\varrho_2$ ,  $*\varrho_3$ ,  $*\varrho_4$  [Kuryłowicz]). For the rest, the voiceless aspirates ( $*ph$ ,  $*th$ ,  $*kh$ ,  $*k^w h$ ) are best seen as local developments, which arose as a separate series only in some Indo-European branches, such as Indo-Iranian and Armenian, while the contrast between velars ( $*k$ ,  $*g$ ,  $*gh$ ) and palatals ( $*\hat{k}$ ,  $*\hat{g}$ ,  $*\hat{gh}$ ) has increasingly been analyzed as non-existent in early Proto-Indo-European. The latest development in the study of Proto-Indo-European phonology is the attempts to propose typologically acceptable systems, among which the Glottalic Theory appears to be one of the most prominent approaches.

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<sup>109</sup> This, of course, is taken from the famous Third Anniversary Discourse presented by Sir William Jones (1746—1794) before the Asiatic Society of Bengal on 2 February 1786.

In Chapter 2 of this book, we began our discussion of Proto-Indo-European phonology by mentioning the views of Lehmann (1952:99). In his most recent work, Lehmann attempts to define what the phonological system of Pre-Indo-European may have been like, and, consequently, he has modified the views presented in his earlier work to take into consideration the greater time-depth involved. First, Lehmann (2002:198—202, 211—214) now accepts a form of the Glottalic Theory. Lehmann (2002:200) reinterprets *\*b*, *\*d*, *\*g*, *\*gʷ* of traditional Indo-European as *\*p'*, *\*t'*, *\*k'*, *\*k'ʷ*, respectively. Furthermore, he (2002:200) reinterprets the traditional plain voiceless stops and voiced aspirates as voiceless and voiced respectively with aspirated and unaspirated allophones, as originally proposed by Gamkrelidze—Ivanov in their version of the Glottalic Theory. As in his earlier work (1952:100—102), Lehmann (2002:214—216) posits only palatovelars and labiovelars, assuming a secondary status for the plain velars reconstructed by the Neogrammarians. Lehmann reconstructs the following four laryngeals: *\*?*, *\*h*, *\*χ*, *\*γ*. Lehmann (2002:201) assumes that *\*χ* and *\*γ* were voiceless and voiced velar fricatives respectively and that *\*γ* may have had a *w*-offglide. Lehmann's revised system is as follows (2002:201):

Vowels								
	Obstruents				Consonants			
	Resonants				Fricatives			
Labials:	<i>p</i>	<i>p'</i>	<i>b<sup>h</sup></i>		<i>m</i>	<i>w</i>		
Dentals:	<i>t</i>	<i>t'</i>	<i>d<sup>h</sup></i>		<i>n</i>	<i>r</i>	<i>l</i>	<i>y</i>
Palatovelars:	<i>k</i>	<i>k'</i>	<i>g<sup>h</sup></i>					<i>s</i>
Labiovelars:	<i>k<sup>w</sup></i>	<i>k'ʷ</i>	<i>g<sup>wh</sup></i>					
Laryngeals:		<i>?</i>				<i>χ</i>	<i>γ</i>	<i>h</i>

Before going further, let us take a look at the interpretation presented in Chapter 2 of this book of what the Hurrian phonological system may have been like:

	Labial	Dental	Affricate	Palatal	Liquids	Velar	Glottal
Voiced	/b/	/d/	/dʒ/	/ž/	/l/ /ll/	/g/	
Voiceless	/p/	/t/	/ts/	/s/		/k/	/ʔ/
Voiced		/z/			/r/ /rr/	/γ/	
Voiceless		/s/				/x/	
Nasals	/m/	/n/ /nn/					
Glides	/w/			/y/			

In the chapter dealing with the comparative vocabulary of Hurrian and Indo-European (Chapter 8), we saw that the voiceless stops of Hurrian correspond to the traditional voiceless stops of Proto-Indo-European and that the voiced stops of Hurrian correspond to both the traditional plain voiced stops and the voiced aspirates of Proto-Indo-European, thus:

Hurrian	Proto-Indo-European
p t k	p t $\hat{k}$ /k
b d g	b d $\hat{g}$ /g
b d g	bh dh $\hat{g}h$ /gh

There is no evidence from Hurrian that there was any distinction between palatal and velar stops such as what is traditionally reconstructed for Proto-Indo-European. This difference can be explained rather easily — originally, Proto-Indo-European did not distinguish phonemic palatal stops from velar stops. The following considerations support this conclusion:

- The palatals only appear in the *satəm* languages (cf. Lehmann 1952:8 and 100—102, 1993:100—101; Meillet 1964:94—95) (and in Luwian, at least for the voiceless member [k̚] [cf. Melchert 1994:234 and 251—252]), while in the *centum* languages, they have the same reflexes as the velars.
- It is not necessary to set up a special series to account for cases in which velars in the *satəm* languages correspond to velars in the *centum* languages, since these examples can be accounted for equally well by assuming just two series (cf. Burrow 1973:76—77; Lehmann 1993:100—101).

This subject is discussed with great lucidity by Meillet (1964:93—94), who notes that the cases in which velars in the *centum* languages correspond to velars in the *satəm* languages occur in certain specific environments: (A) before \*a, (B) before \*r, (C) after \*s, and (D) at the end of roots, especially after \*u. Meillet sums up his discussion of the gutturals by noting that the velars were simply preserved in certain positions and palatalized in others.

Thus, there is no need to reconstruct a separate series of palatals for Proto-Indo-European, at least in the earlier stages of development. Rather, originally, there was a single series — the velars. The velars may be assumed to have had non-phonemic palatalized allophones in some environments and non-palatalized allophones in other environments. At a later date, these allophones became phonemic. The Romance languages provide an excellent model for how these changes could have occurred (for details, cf. Mendeloff 1969; Elcock 1960). Here, Hurrian represents the original state of affairs. For more information on the reconstruction of the gutturals in Proto-Indo-European and on different approaches to the *centum/satəm* problem, cf. Meillet 1964:91—95; Lehmann 1952:100—102; Beekes 1995:109—113 and 129—129; Burrow 1973:73—77; Fortson 2004:53—54 and 168; Szemerényi 1996:59—67; Clackson 2007:49—53.

Moreover, there is nothing to suggest that there was any distinction in Hurrian between plain and aspirated voiced stops such as what is found in Proto-Indo-European. Both series

correspond to plain voiced stops in Hurrian. Even within Indo-European, these two series have the same reflexes in several of the daughter languages. Moreover, the reconstruction of voiced aspirates is only needed to account for the developments in certain branches (Indo-Iranian, Greek, Armenian, and Italic). Finally, there is nothing in the Anatolian Indo-European daughter languages to indicate that the voiced aspirates of traditional grammar were anything other than plain voiced stops. And yet, when the entire corpus of comparative data from the Indo-European daughter languages is taken into consideration, it is clear that it is still necessary to posit two separate series here at the level of the Indo-European parent language, as well as a third series, the traditional plain voiceless stops.

One solution is to see the traditional voiced aspirates as later developments within Proto-Indo-European and to reinterpret them as plain voiced stops. This then makes it necessary to interpret the traditional plain voiced stops as something else in order to maintain the distinction between the two series. Proposals include seeing the traditional plain voiced stops as glottalized stops (ejectives) or as plain (unaspirated) voiceless stops. Under both these proposals, the traditional plain voiceless stops are then reinterpreted as voiceless aspirated stops. Lehmann (2002:201) opts for the first alternative — glottalized stops. Unfortunately, Hurrian adds nothing to the solution. This leads us to the question of what must be reconstructed to account for both the Hurrian and Indo-European developments. Clearly, the traditional plain voiced stops and voiced aspirates represent two distinct series in Proto-Indo-European, the Hurrian correspondences notwithstanding. Thus, we suggest the following interpretation: (1) the traditional voiced aspirates (*\*bh*, *\*dh*, *\*gh*) of Indo-European grammar are to be derived from earlier plain voiced stops (*\*b*, *\*d*, *\*g*), (2) the traditional plain voiced stops (*\*b*, *\*d*, *\*g*) from glottalized stops (ejectives) (*\*p'*, *\*t'*, *\*k'*), and (3) the traditional voiceless stops (*\*p*, *\*t*, *\*k*) from voiceless aspirates (*\*p<sup>h</sup>*, *\*t<sup>h</sup>*, *\*k<sup>h</sup>*) — the aspiration was non-phonemic and will not be written in what follows. Accordingly, we get:

	Pre-Hurrian / Indo-European	Hurrian	Traditional Proto-Indo-European
Labial: Voiceless	p	p	p
Glottalized	p'	b	b
Voiced	b	b	bh
Dental: Voiceless	t	t	t
Glottalized	t'	d	d
Voiced	d	d	dh
Velar: Voiceless	k	k	â/k
Glottalized	k'	g	â/g
Voiced	g	g	âh/gh
Labiovelar: Voiceless	k <sup>w</sup>	ku	k <sup>w</sup>
Glottalized	k <sup>w</sup>	gu	g <sup>w</sup>
Voiced	g <sup>w</sup>	gu	g <sup>wh</sup>

Note: The phoneme traditionally reconstructed as *\*b* was extremely rare in Proto-Indo-European, and some have questioned whether it even existed at all.

Proto-Indo-European had a series of syllabic resonants:  $*m$ ,  $*n$ ,  $*l$ ,  $*r$ . In the parallels that we are uncovered between the vocabularies of Hurrian and Proto-Indo-European, these sounds are consistently represented in Hurrian as follows:

Proto-Indo-European	Hurrian
$\underset{\circ}{m}$	um
$\underset{\circ}{n}$	un
$\underset{\circ}{l}$	ul
$\underset{\circ}{r}$	ur

Thus, it appears probable that a series of syllabic resonants is to be reconstructed here as well for Pre-Hurrian/Indo-European:  $*m$ ,  $*n$ ,  $*l$ ,  $*r$ .

Next, Hurrian contained a series of dental affricates. Such sounds are missing from Proto-Indo-European. This gap has always been problematic from a typological perspective. In general, a contrast between velars and labiovelars, such as that posited for Proto-Indo-European, implies a frontal contrast of some kind. There are various ways in which this frontal contrast can be realized: (a) palatalized alveolar stops, (b) palato-alveolar affricates, or (c) dental affricates. In the lexical parallels between Hurrian and Proto-Indo-European that we have uncovered, the Hurrian dental affricates correspond to dental stops in Proto-Indo-European. We assume that Hurrian preserved the original situation and that the dental affricates were eliminated in Proto-Indo-European through deaffricatization and merger of the resulting sounds with the traditional dental stops, thus:

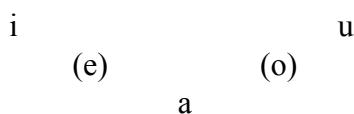
$$\begin{aligned} \underline{ts} &> *t \quad (> \text{traditional } *t) \\ \underline{ts}' &> *t' \quad (> \text{traditional } *d) \\ \underline{dz} &> *d \quad (> \text{traditional } *dh) \end{aligned}$$

(It may be noted that similar changes have taken place in Coptic [cf. Loprieno 1995:42—44].) In Hurrian, on the other hand,  $\underline{ts} > \underline{ts}$ , while  $\underline{ts}'$  and  $\underline{dz}$  merged into  $\underline{dz}$ .

Finally, there are the laryngeals. In Chapter 2, we posited four laryngeals for Proto-Indo-European, without defining their phonetic characteristics:  $*H_1$ ,  $*H_2$ ,  $*H_3$ , and  $*H_4$ . Laryngeals  $*H_1$  and  $*H_4$  are not represented in the Hurrian writing, while  $*H_2$  and  $*H_3$  appear as  $h$ . In Akkadian,  $h$  represents a voiceless velar fricative /χ/. Hurrian had both voiceless and voiced velar fricatives, /χ/ and /γ/, both of which were written with the signs for  $h$ .

Thus, it appears the the phonological system that needs to be reconstructed for Pre-Hurrian/Indo-European is as follows:

### Vowels



	Consonants					
	Obstruents			Resonants		Fricatives
Labials:	p	p'	b	m/m̥	n/n̥	r/r̥ l/l̥
Dentals:	t	t'	d			
Affricates:	ts	ts'	dz			s
Velars:	k	k'	g			
Labiovelars:	kʷ	k'ʷ	gʷ			
Laryngeals:						H <sub>1</sub> H <sub>2</sub> H <sub>3</sub> H <sub>4</sub>
Glides:				w	y	

## Earlier Stages of Proto-Indo-European Morphology

The form of Proto-Indo-European reconstructed by the Neogrammarians bears a striking resemblance to daughter languages such as Sanskrit, Latin, and Greek. Even though major modifications of the traditional reconstruction have had to be made to accommodate the data presented by Hittite<sup>110</sup> and the other Indo-European Anatolian languages (Palaic, Cuneiform and Hieroglyphic Luwian, Lycian, and Lydian), the revised reconstruction that has been emerging (cf. Clackson 2007:90—156; Fortson 2004:81—125), though no longer as heavily reliant upon the highly complex Sanskrit and Greek models, still posits a moderately complex inflectional system and is still of a relatively shallow time-depth (cf. Lehmann 2002:251).

There is a growing recognition that the morphological system of Proto-Indo-European that can be recovered from the evidence of the daughter languages is descended from a more ancient system that was most likely characterized by an active structure. Although Proto-Indo-European was no longer a language with an active structure, it still displays a certain number of features and patterns that point to an earlier stage of development with active structure. These features and patterns are discussed in great detail by Lehmann in his 2002 book *Pre-Indo-European*. In active languages,<sup>111</sup> subjects of both transitive and intransitive verbs, when they are agents semantically, are treated identically for grammatical purposes, while non-agent subjects and direct objects are generally treated differently. An “agent” may be defined as the entity responsible for a particular action or the entity perceived to be the cause of an action. Proponents of this view include Thomas V. Gamkrelidze, Vjačeslav V. Ivanov, Winfred P. Lehmann, and Karl Horst Schmidt, among others. In his recent book entitled *Pre-Indo-European*, Lehmann (2002:59—60) gives a brief description of the morphological patterns in Indo-European reflecting an earlier active structure:

The inflections of active/animate nouns and verbs differ characteristically from those of the stative/inanimate counterparts in active languages. Active nouns have more inflected forms than do statives. Moreover, there are fewer inflected forms in the plural than in the singular. The first of these characteristics is reflected in the neuter inflections of the Indo-European languages, which are reflexes of earlier stative inflections. They lack a distinction between nominative and accusative; moreover, their oblique forms may have endings from the masculine or feminine declensions that are reflexes of earlier

<sup>110</sup> For a comprehensive treatment of Hittite morphology, cf. Hoffner—Melchert 2008.

<sup>111</sup> Active languages are sometimes called “agentive” languages.

active inflection. The situation is also notable in the plural, where forms corresponding to singular inflections may be absent; the plural inflection of Hittite nouns has few case distinctions, and even Sanskrit nouns have fewer distinct forms in the plural than in the singular.

Similarly, stative verbs have fewer inflections than do the active. The perfect and the middle in Indo-European languages are reflexes of the earlier stative conjugation. The distinctive endings of the perfect are found only in the three singular forms, and the third plural; except for the third person, the endings in the plural are taken from the present/aorist system, which is a reflex of the earlier active conjugation.

As another characteristic verbal inflections express aspect, not tense, in active languages. The reflexes in the early dialects are quite clear, as for the use of the present to indicate activity versus that of the perfect to indicate state.

Stative verbs are often comparable in meaning to adjectives. Accordingly, adjectives as a class were absent in Pre-Indo-European. A detailed study of Germanic adjectives has found few that have cognates in the other dialects (Heidermanns 1993). Moreover, there is no comparable form for the comparatives and superlatives throughout the different dialects. When these categories were introduced, some of the more frequent adjectives maintained suppletive forms, such as Latin *malus*, *peior*, *pessimus* ‘bad, worse, worst’. And when adjectives became a distinct class, individual dialects like Germanic and Slavic developed new inflections, the so-called weak, as well as maintaining a strong inflection comparable to that of nouns. There is then considerable evidence that adjectives as a distinct class were not present in the earlier language.

Active languages are also characteristic in distinguishing between inalienable and alienable reference in personal pronouns. Prokosch recognized a reflex of this situation in the forms from Proto-Indo-European \**we-* that are found in the first as well as the second plural of Germanic pronouns, e.g. Gothic *weis* ‘we’, *izwis* ‘you’ (acc.), noting the same root in Latin *vōs* ‘you’ and second plural forms of other dialects (1939:282).

Moreover, possessive and reflexive pronouns are often absent in active languages. The Indo-European languages provide evidence for such a situation through their great variety in expressing those pronouns. For example, languages as recently separated as English and German have different forms for reflexive pronouns, e.g. English *myself*, German *mich*, English *himself, herself*, German *sich*. The German form *sich* provides evidence for the late development of these expressions; it was created on the basis of the first and second singular forms *mich* and *dich*.

Earlier in his book, Lehmann (2002:4—5) also notes:

As a fundamental characteristic of active languages, the lexicon must be regarded as primary. It consists of three classes: nouns, verbs and particles. Nouns and verbs are either animate/active or inanimate/stative. Sentences are constructed on the basis of agreement between the agent/subject and the verb; they are primarily made up of either active nouns paired with active verbs or of stative nouns paired with stative verbs. Particles may be included in sentences to indicate relationships among nouns and verbs. In keeping with active structure, the lexical items are autonomous...

In accordance with this structure, two nouns and two verbs may be present in the lexicon for objects and actions that may be regarded on the one hand as being active or on the other hand as representing a state. Among such phenomena is fire, which may be flaring and accordingly viewed as active or animate, as expressed by Sanskrit *Agnis* and Latin *ignis*, which are masculine in gender, or as simply glowing and inactive, as expressed by Hittite *pahur*, Greek *pūr* [πῦρ], which are neuter in gender. Similarly, the action lying may be regarded as active, i.e. ‘to lie down’, as expressed by Greek *lēgō* [λέγω] ‘lay, lull to sleep’ (cf. Pokorny 1959:658—59) or as stative, as expressed by Greek *keītai* [κεῖται], Sanskrit *séte* ‘is lying’ (cf. Pokorny 1959:539—40). Through their inflection and some of their uses, such lexical items may be recognized in the texts; but by the time of the dialects the earlier distinctions may have been lost. As Pokorny says of reflexes of \**legh-*, it was punctual originally but its reflexes subsequently became durative. Other verbs as well as nouns were modified so that specific active or stative meanings of their reflexes were no longer central in the dialects.

As a further characteristic, there is relatively little inflection, especially for the stative words. Inactive or stative verbs were inflected only for the singular and third plural. This restriction is of especial interest because it permits us to account for one of the features of the Indo-European perfect. As will be discussed further below, the perfect has been recognized as a reflex of the Pre-Indo-European stative conjugation. In this way, its stative meaning as well as the inclusion of characteristic forms only for the singular and the third plural find their explanation.

In the last chapter of his 1952 book *Proto-Indo-European Phonology*, Lehmann attempts to determine earlier stages of development for Proto-Indo-European. Lehmann (1952:109—114) recognizes four separate stages:

1. Pre-Indo-European;
2. The Phonemic Stress Stage of Proto-Indo-European;
3. The Phonemic Pitch Stage of Proto-Indo-European;
4. Proto-Indo-European proper (“Late Proto-Indo-European”).

Lehmann returns to this matter in Chapter 8 of his 2002 book *Pre-Indo-European*. Here, he recognizes the same four stages but updates the presentation on the basis of research that has taken place between the publication of this book (2002) and his earlier work (1952) mentioned above.

## Pre-Indo-European and Pre-Hurrian Nominal Morphology

In a paper published in 1958, Lehmann attempted to ascertain the earliest stage of Proto-Indo-European nominal morphology and to trace its development through subsequent stages. Lehmann returned to this topic on several other occasions over the years. This research was incorporated into his 2002 book *Pre-Indo-European*. According to Lehmann (2002:185), three markers represent the most ancient layer of nominal inflection and came to provide the basis for the development of the central case system: (1) *\*-s*, which was used to indicate an individual and, when used in clauses, the agent; (2) *\*-m*, which indicated the target when used in clauses; and (3) *\*-H<sub>4</sub>* (Lehmann writes *\*-h*), which supplied a collective meaning. Lehmann (2002:183—186) assumes that the first new case to be added to this system was most likely the genitive singular, followed, in due course, by the locative and dative singular. He (2002:185) further notes that, initially, there were only two gender classes: a common gender (animate) and a neuter gender (inanimate). Lehmann (2002:146—150) also points out that, in the earliest stage of development, the stage he calls “Pre-Indo-European”, other grammatical relationships were indicated by particles. Finally, as noted above, the most ancient system was most likely characterized by an active structure.

Gamkrelidze—Ivanov also discuss earlier periods of development in their massive 1995 book *Indo-European and the Indo-Europeans* (original Russian version 1984). Others who have made important contributions on this subject include Erich Neu, Karl Horst Schmidt, Francisco Adrados, Kenneth Shields, William R. Schmalstieg, Vladimir Georgiev, Reinhard Stempel, Francisco Villar, to name the most prominent.

In accordance with Lehmann's findings, the following case forms can be reconstructed for Pre-Indo-European:

Function (> Case)	Common Gender	Neuter
Subject (> Nominative)	-s	
Object (> Accusative)	-m	
Subject or Object (> Nominative/Accusative)		-m / -Ø

In Chapter 4 above, we suggested that the following markers represent the most ancient layer in Hurrian nominal inflection:

Case	Animate	Inanimate
Inactive (> Absolutive)		-Ø
Active (> Ergative)	-s	
Patient (> "Accusative")	-n	

We also noted that, during the most ancient period of development in Hurrian, other relationships within a sentence were indicated by means of particles. These particles later became integrated into the declensional system, though their original status as independent particles is still clear by their positioning (cf. Bush 1964:119). Many of these particles have parallels in Indo-European. We can envision an earlier period characterized by an active structure similar to what is assumed to have existed in the earliest Pre-Indo-European by Lehmann, Gamkrelidze—Ivanov, Karl Horst Schmidt, and others.

Thus, we arrive at the following conclusions concerning Pre-Hurrian/Indo-European nominal morphology:

1. Pre-Hurrian/Indo-European was characterized by an active-type morphological structure.
2. The nominal case system was simple, consisting, at most, of three formatives: (a) \*-s, which indicated an agent, (b) \*-m, which indicated a patient, and (c) \*-H<sub>4</sub> (at least for Pre-Indo-European), which supplied a collective meaning.
3. Other grammatical relationships were indicated by particles.
4. There were only two gender classes: (a) animate and (b) inanimate.

Pre-(Urarto-)Hurrian and Pre-Indo-European may be assumed to have diverged before the declensional system was filled out beyond the formatives mentioned above. Each constructed and modified its declensional system independently. Moreover, Hurrian developed into an ergative language, while Proto-Indo-European developed into an accusative language (though there are traces of ergative structure in Hittite [cf. Hoffner—Melchert 2008:66—67]). Therefore, we would not expect additional case forms to be comparable, and, indeed, they are not. However, as we saw above in Chapter 4, many of these case forms were built from common elements.

## Pre-Indo-European and Pre-Hurrian Verbal Morphology

Lehmann (2002:169—177) reconstructs two conjugational types for Pre-Indo-European: (1) an active conjugation and (2) a stative conjugation, each of which had its own set of personal endings. The stative developed into the so-called “perfect” of traditional grammar.

In Chapter 6 above, we suggested that the Pre-Indo-European personal endings for active verbs may have been as follows:

Person	Singular	Plural
1	*-m / *-w	*-me / *-we
2	*-t	*-te
3	*-Ø, *-s	*-en

Stative verbs, on the other hand, were characterized by the following set of personal endings during the same period:

Person	Singular	Plural
1	*-H <sub>2</sub> e	
2	*-tH <sub>2</sub> e	
3	*-e	*-er

Some salient morphological features of Pre-Indo-European include the following (cf. Gamkrelidze—Ivanov 1995.I:233—321):

1. Object-like relationships were indicated by the position of nouns immediately before the verb. The word order patterning for sentences with active verbs was: Subject + Adverbial Expression + Object + Verb; inasmuch as stative verbs generally had a stative noun as patient, the patterning for sentences with stative verbs was: Subject (= Patient) + Adverbial Expression + Verb.
2. Verbs and nouns were either active/animate or stative/inanimate.
3. Sentences were constructed by pairing either stative nouns with stative verbs or active nouns with active verbs, less frequently with stative verbs.
4. Active verbs were more highly inflected than stative verbs.
5. Stative verbs had little inflection.
6. There were no tense distinctions in verbs; aspect distinctions were dominant. Two aspects were probably distinguished: (a) imperfective aspect and (b) perfective aspect.
7. Particles played an important role.

The only non-finite verb form that can be securely reconstructed for Pre-Indo-European was the participle in \*-nt-, which conveyed active meaning when added to active verbs but stative meaning when added to stative verbs.

Gamkrelidze—Ivanov (1995.I:283—286), among others, note the agglutinative character of the active personal endings in Proto-Indo-European. It is clear they have arisen from

earlier deictic elements: (a) *\*-m-*, (b) *\*-w-*, (c) *\*-t-*, and (d) *\*-s-*. The relationship of the first three elements to the personal pronoun stems is obvious: (a) *\*me-*, stem of first person singular, used to form the oblique cases; (b) *\*we-*, stem of first person, singular and plural (later also dual); and (c) *\*te-*, stem of second person singular. The last element is related to the deictic stem *\*so-*, which developed into a demonstrative pronoun in the daughter languages: ‘this, that’. The later second person personal ending *\*-s-* may also have been related to an independent personal pronoun stem *\*si-* ‘you’, which no longer existed in the later stages of Proto-Indo-European, having been completely replaced by *\*tu-/te-*. Finally, the third plural ending *\*-(e)n* is related to the anaphoric pronoun stem *\*ne-/no-* found, for example, in: Hittite *na-aš* ‘that’; Armenian *na* ‘that; he, she, it; him, her’.

In active verbs, the plural was distinguished from the singular by an intraparadigmatic accent shift (cf. Beekes 1995:234; Clackson 2007:124; Fortson 2004:87; Meillet 1964:241; Szemerényi 1996:314). In the singular, the root was accented and had full-grade, while the endings had zero-grade. In the plural, the position of the accent was shifted to the ending, with the result that the root had zero-grade, while the endings had full-grade. This patterning has been most clearly preserved in Sanskrit, which is particularly archaic in this regard. The patterning was as follows, using the verbal root *\*H<sub>1</sub>es-* ‘to be’ for illustration:

	Singular		Plural
1	<i>*H<sub>1</sub>és + *me</i> > <i>*H<sub>1</sub>és-m</i>	<i>*H<sub>1</sub>es + *mé</i> > <i>*H<sub>1</sub>s-mé</i>	
	<i>*H<sub>1</sub>és + *we</i> > <i>*H<sub>1</sub>és-w</i>	<i>*H<sub>1</sub>es + *wé</i> > <i>*H<sub>1</sub>s-wé</i>	
2	<i>*H<sub>1</sub>és + *te</i> > <i>*H<sub>1</sub>és-t</i>	<i>*H<sub>1</sub>es + *té</i> > <i>*H<sub>1</sub>s-té</i>	
3	<i>*H<sub>1</sub>és + *(H<sub>1</sub>)e</i> > <i>*H<sub>1</sub>es-Ø</i>	<i>*H<sub>1</sub>es + *(H<sub>1</sub>)é</i> > <i>*H<sub>1</sub>s-é</i>	

Note: There may have been alternative endings for the first person.

An important assumption here is that the original ending of the third person was *\*-(H<sub>1</sub>)e* — the same ending found in the stative verbs. This assumption is based upon the observation that the form of the third plural is anomalous. Had *\*ne-* been added directly to the root, the expected form would have been as follows: *\*H<sub>1</sub>es- + \*né* > *\*H<sub>1</sub>s-né*, just like in the first and second persons plural. However, the actual form was *\*H<sub>1</sub>s-én* (> *\*H<sub>1</sub>s-én-t-i*, after *\*-t-* and *\*-i* were added [cf. Sanskrit *sánti* ‘they are’]). This indicates that *\*ne-* was not added directly to the root but, rather, to *\*H<sub>1</sub>s-é*, thus: *\*H<sub>1</sub>s-é + \*ne* > *\*H<sub>1</sub>s-é-n*. Here, the accent was kept on the ending *\*-é-*, and, consequently, the element *\*ne* had zero-grade. By the way, the same patterning may be observed in the third plural of stative verbs, where *\*-ér* is to be derived from *\*-é + \*re*.

The personal endings of stative verbs are to be analyzed in the same way. The first person singular ending *\*-H<sub>2</sub>e* is to be seen as an earlier deictic element. The same element was added to the second person singular ending *\*-te*: *\*-te + \*-H<sub>2</sub>e* > *\*-tH<sub>2</sub>e*. The third person singular ending *\*-e* was probably originally the deictic element *\*-(H<sub>1</sub>)e*. Finally, the third person plural ending is probably to be derived from an earlier deictic element *\*re*.

Unlike the active verbs, there was no intraparadigmatic accent shift in the stative verbs. Here, the accent remained on the ending throughout the paradigm:

Person	Singular	Plural
1	*-H <sub>2</sub> é	
2	*-tH <sub>2</sub> é	
3	*-é	*-é-r

Pre-Indo-European subsequently went through several stages of development during which the verbal paradigm was reshaped and greatly expanded, especially as it was changing from an active-type language to an accusative-type language. These changes continued into Proto-Indo-European proper. These developments are outlined in Chapter 6 of this book.

As noted in Chapter 6 above, the different personal endings for Hurrian verbs are as follows:

	Intr. Present	Tr. Present	tr. + anaphoric	Past
P1 sg.	-tta	-aw	-aw-(u)nna	-š-aw
P2 sg.	-mma	-b		
P3 sg.	-a	-a	-a-nna	-š-a / (arch.) -b
P1 pl.	-tilla	-awz(a)		
P2 pl.	-abba	-aššu / -uššu		
P3 pl.	-lla	-tu -ta		

The comparison of these elements with Proto-Indo-European has already been done in Chapter 6. However, a few additional observations may be offered. It is curious that the Hurrian first and second person singular intransitive personal endings have the same forms as the Proto-Indo-European first and second person active personal endings, except that they are reversed. In form, the Hurrian first person singular intransitive ending *-tta* resembles the Proto-Indo-European second person singular active personal ending *\*-t* (plural *\*-te*), while the Hurrian second person singular intransitive ending *-mma* resembles the Proto-Indo-European first person singular active personal ending *\*-m* (plural *\*-me*). However, things are not as straightforward as they appear here. Careful investigation is required.

First, it appears that an earlier deictic element *\*-me* was used as the second person singular ending (> *-mma*) in Hurrian, while an earlier deictic element *\*-te* was used as the first person singular ending (> *\*-tta*). In Proto-Indo-European, on the other hand, the same deictic element *\*-me* was used as the first person ending (> sg. *\*-m*, pl. *\*-me*), while *\*-te* was used as the second person ending (> sg. *\*-t*, pl. *\*-te*).

However, the Proto-Indo-European developments may be due to a rather late innovation, at least for the first person. As we saw above, there was a competing first person form in Pre-Indo-European: (sg.) *\*-w*, (pl.) *\*-we*. Though the non-Anatolian daughter languages are nearly unanimous in requiring a reconstruction of (sg.) *\*-m(i)*, (pl.) *\*-me(-n/s)-* for their common first person personal endings, all have forms pointing to *\*-w/u-* as well, such as the first person dual endings. The Anatolian languages, on the other hand, provide rather strong evidence for earlier *\*-w/u-* in the singular and plural (they lack dual formations), though Hittite also has the first person singular ending *\*-mi* in the *mi*-conjugation in agreement with the non-Anatolian daughter languages. Thus, the following scenario may be posited: The distribution of the personal

endings was changing at the time that the Anatolian branch split off from the rest of the Indo-European speech community. In Pre-Indo-European, the *\*-w-* first person personal endings prevailed: (sg.) *\*-w*, (pl.) *\*-we*. Just prior to the split of the Anatolian languages, the new first person personal endings (sg.) *\*-m*, (pl.) *\*-me* began to replace the *\*-w-* endings. Though not yet complete in the Anatolian branch, this replacement was carried through to completion in the Proto-Indo-European ancestor of the non-Anatolian languages for the first person singular and plural, while the *\*-w/u-* endings were relegated to the dual.

Thus, we can see that, in both Proto-Indo-European and Hurrian, the personal endings arose from earlier deictic elements (these are discussed in Chapters 4 and 6 above). The plural was constructed differently in Hurrian than in Proto-Indo-European.

The origin of the transitive personal endings in Hurrian may be depicted as follows:

	Later (attested)	Earlier
P1 sg.	-aw	<i>*-a-w</i>
P2 sg.	-b	<i>*-w</i>
P3 sg.	-a	<i>*-a</i>
P1 pl.	-aw̄(a)	<i>*-a-w</i> + plural
P2 pl.	-aššu / -uššu	<i>*-u</i> + plural
P3 pl.	-tu -ta	<i>*-tu</i> <i>*ta</i>

Here, the plural is clearly built upon the singular through the addition of plural markers after the personal endings, at least for the first and second persons. It may be noted that the same process occurred independently and at a later date in Proto-Indo-European, where, for example, the first person plural ending was extended by the plural markers *\*-s* or *\*-n* in the various daughter languages: *\*-me* + *\*-s*/*\*-n* > *\*-mes*/*\*-men*, which could, in turn, be further extended by the particle *\*-i* to form the so-called “primary endings” (cf. Sanskrit *-masi*; Hittite *-mani/-meni* [only after *-u-*; elsewhere, *-wani/-weni*]; etc.). Finally, note here the Hurrian first singular transitive ending *-aw*, which was derived from the same *\*-w-* element reconstructed above for the first person endings in Pre-Indo-European.

## Concluding Remarks

Our discussion now comes to an end. In the course of this book, we have attempted to show, through a careful analysis of the relevant phonological, morphological, and lexical data, that Urarto-Hurrian and Indo-European are, in fact, genetically related at a very deep level, as we indicated at the beginning of this chapter by quoting from the famous Third Anniversary Discourse (1786) of Sir William Jones. We propose that both are descended from a common ancestor, which may be called “Proto-Asianic”, to revive an old, but not forgotten, term.



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